

REGENT INSTITUTIONAL EFFICIENCY EFFORTS

The Regent institutions are educating over 72,000 students spread across more than 4,500 on-campus and 600 off-campus acres (excluding farm acreage). The universities make a significant contribution to the Iowa economy by conducting academic research that results in intellectual property and applications available to the marketplace and by providing expertise and assistance directly to Iowa's people, industry and communities. We are a \$4.9 billion enterprise dedicated to making Iowa the best through education, research and public service.

As State appropriations have decreased and tuition increases have been frozen or kept minimal, the Board of Regents has directed the public universities and special schools to expand efforts to find efficiencies and cost-savings in the delivery of services.

This document provides information for the last few years on those efficiencies broken down as:

1. Business Operations
 - a. Purchasing
 - b. Fleet Operations
 - c. Other
2. IT Services and Operations
3. Personnel and Benefits
4. Facilities and Sustainability
5. Academic and Administrative

1. BUSINESS OPERATIONS

a. PURCHASING

The Regents institutions have annual procurement spend over \$1 billion, with about 7% being state appropriated funds. Of that amount, \$369 million is spent on joint State and Regents master contracts – contracts that have been competitively bid or negotiated for use by all Regent institutions. These contracts are extended to other state agencies wherever possible. Regent universities' cost to process a dollar of spend through central procurement is \$.004, under the benchmark in the private sector of one-half a cent.

Savings are derived from strategic sourcing efforts which include steering purchases to master agreements, negotiating additional rebates, volume discounts and standardization on products. Leveraged savings through purchasing efforts were:

FY 2009 – **\$24,641,324**

FY 2010 – **\$17,260,396**

FY 2011 – **\$14,017,748**

FY 2012 – **\$20,195,314**

FY 2013 – **\$23,569,917**

Recent examples of savings from collaborative strategic sourcing initiatives are found in Appendix 1.

University of Iowa –

The University of Iowa systems are comprehensive, serving the entire university enterprise including the hospitals and clinics and the practice plans.

University of Iowa accounts for over 60% of the total procurement spend for the Regent Institutions. Of the \$646 million in purchases of goods and service 79.5% is made on strategically-sourced master agreements.

US Bank has stated the University of Iowa's Procurement Card program is "Best in Class". In March of 2010, the University of Iowa negotiated with US Bank to create a consortium agreement to add State of Iowa Agencies to the Procurement Card Master Agreement. The Department of Administrative Services and 15 other state agencies and political subdivisions have joined this agreement to date. It is anticipated that at the end of FY 2014, **over \$1.18M in additional rebates will be distributed to the participating entities.**

Starting in 2008, Purchasing managed the implementation of 26 departmental inventory systems across campus using PeopleSoft Inventory module. Currently 58 inventory catalogs have been established containing over 123,000 inventory and non-inventory items. These implementations allowed for the decommissioning of mainframe inventory systems, improved restocking via auto replenishment and allowed closer management of inventory levels to insure that the investment in materials and supplies is kept at the lowest level possible. The increase in detailed line-level purchase orders has enabled the University to allow electronic matching of the order price to the invoice price, ensuring vendors are not passing on increased costs to the University. Ordering by items has also enabled the University to further negotiate savings on purchases by understanding specifically what is being purchased.

In 2009, "Ebuy", a third-party hosted e-procurement system developed by SciQuest, was implemented to deliver contracted pricing to University departments. This marketplace hosts over 20 master agreements. In fiscal year 2013, over \$29M in purchases was made using the electronic marketplace, with over 34,000 purchase orders delivered electronically. During the same period, over \$290,000 in technology fees was received from enabled suppliers helping to cover ongoing system expenses. Additionally, during fiscal year 2013, enabled suppliers were paid via a central procurement card for over 43,000 transactions totaling more than \$14M. **An estimated \$500,000 in contract savings has been achieved** through improved contract compliance with primary suppliers.

The University of Iowa Purchasing Department implemented the PeopleSoft Supplier Contract Management solution in 2010 as an integrated addition to the PeopleSoft Financial system. With the system, contracts can be electronically collaborated with other campus departments, risk management, general counsel, as well as suppliers. The system has enabled the Purchasing department to advance greatly toward the University's overall sustainability goals. In addition, the University now has immediate access to a completely searchable document repository of all University-signed contracts, as well as receiving electronic notifications of upcoming contract expirations and renewals, helping to reduce the potential for contract lapses. During fiscal year 2013, approximately 2,800 contracts were processed through the contract management system. It is estimated that the contract

authoring and signature process is now more than 90% paper-free and that the University is saving \$10,000 or more annually as a result of the reduced use of paper in printing contracts for signature and time savings for clerical staff in tracking and managing the contract process.

University of Iowa participates in a Big Ten purchasing consortium with the other institutions (Committee on Institutional Cooperation Purchasing Consortium or CICPC) using volume and standardization as the basis for additional savings. Since 2000, the University of Iowa has purchased over \$21.5 million from CICPC Master Agreements, with a savings of **\$1.51 million** or an average of 7% per year. The combined volume of all these Big Ten institutions offers the University of Iowa the largest savings opportunity when compared to State Master Agreements for executive search firms, background checks, IT equipment, maintenance agreements, audio visual equipment, software purchases, office supplies, scientific supplies, and other products that institutions more similar to the University of Iowa procure.

Over the past ten years, due to electronic systems enhancements and greater efficiencies, Purchasing department staff have decreased by 4 FTE with the elimination of virtually all temporary employees while University spending rose from \$300 to \$646 million. Specific efficiencies are found in Appendix 1.

University of Iowa's Surplus department diverts over 1 million pounds from the landfill and averages **over \$600,000 in sales annually**.

Iowa State University

ISU purchasing has received the Achievement in Excellence in Procurement Award from the National Purchasing Institute for eight consecutive years. ISU is one of only 17 higher education agencies in the United States to receive this award for FY 2013. The criteria of this award are designed to measure innovation, professionalism, productivity, e-procurement, and leadership attributes of the procurement organization. See Appendix 1.

Iowa State University's Surplus Program **returned over \$170,000 of reusable assets** into university operations in 2010.

ISU Purchasing offers value-added procurement through collaboration, identification of new sources and alternate products, competitive acquisitions, negotiations of better discounts, and contract management that **saved more than \$15 million** in FY 2013 alone.

72% of total spend through ISU purchasing is on strategically-sourced Master contracts.

University of Northern Iowa

UNI implemented a number of procedural improvements that have resulted in savings, primarily in the form of staff resources, but also includes actual savings or increases in revenue.

The university collaborates with the other universities in joint bidding and procurement to allow economies of scale pricing.

A **savings of over \$300,000** was realized with the current year bid for coal, due primarily to a change in timing of bid solicitation.

Bids are solicited from vendors electronically and paper copies are only requested when specifically needed.

See Appendix 1.

Iowa School for the Deaf

The Iowa School for the Deaf uses Iowa State University's purchasing department for all purchases in excess of \$5,000. Efficiencies are also found via a consortium of local school districts and AEA 13 for the purchase of paper products.

Iowa Braille and Sight Saving School

The Iowa Braille School processes all purchases greater than \$5,000 through the Iowa State University Purchasing Department. The Iowa Braille School does utilize state contracts whenever possible (e.g. Dell Computers, Office Max, Goodyear Tires) for purchases less than \$5,000. In addition, the Iowa Braille School orders all of its paper products (copier paper, toilet paper, paper towel) from the Iowa State's Central Store.

b. FLEET OPERATIONS

The three public universities operate campus fleets, while working collaboratively to set policies and standards for those fleets. These fleets are not state-funded, but are self-supporting. Several years ago the Board of Regents and its three public universities and two special schools formed the Regents Motor Vehicle Liability Pool (MVLN), which allows fleet vehicles to be self-insured in a combined pool up to \$250,000. Compared to the insurance cost on a mid-size auto, the MVLN saves approximately \$464 per vehicle per year. Applied to the total number of vehicles at Regent institutions that **savings is almost \$1,000,000** a year.

The MVLN reduces the state's contribution by providing the first layer of coverage for many tort claims. It also permits low dollar claims to be settled more rapidly and enhances third party satisfaction when a Regent institution driver was the cause of a third-party claim. The Regent institutions minimize financial losses by maintaining lot insurance coverage that addresses certain large losses, i.e., a hail storm that hits at a location housing multiple Regent fleet vehicles.

The cost of operating the Regents fleet operations is regularly compared to vehicle rental costs through a rental agency. For several years, Regent institutions have maintained a joint fleet overflow contract with a car rental agency awarded through a competitive process. When the Regents fleet overflow contract was again being competitively bid, the State of Iowa was also bidding a vehicle rental contract. During those two negotiations, an opportunity was extended to access the lower rates bid to the state, based on their more substantial rental volume.

The resultant fleet overflow rental contract includes unlimited miles with a monthly cap, but does not cover the cost of fuel. For certain trips the fleet overflow contract provides a more cost effective option; for others it does not. For example, if a university traveler rented a mid-size car through the contracted rental agency it would cost approximately \$33.00 a day plus

fuel for unlimited mileage. At ISU, that same vehicle rented from the campus motor pool costs \$25.90 for a daily rate, which includes fuel, plus a mileage rate charged after an allotted number of miles. Similarly a 7-passenger van from the rental agency would cost \$50.00 a day plus fuel; at ISU that same van from the daily campus motor pool would be \$33.60, including fuel. Conversely a one day trip with a large number of miles accumulated might be less costly using the fleet overflow contract. Use of the fleet overflow contract is managed by each university's fleet operation. Having this option enables fleet operations to manage vehicle utilization, select the most appropriate trips for overflow contract utilization, and reduce costs overall.

Equally important is the percentage utilization of university-owned vehicles. Utilization rates are high at all three fleet locations. The average utilization rate for daily rental pool passenger vehicles exceeds 60% at UNI; ISU operates at a 79%; SUI's is 74%. High utilization rates and lower costs are a direct benefit for the institutions and demonstrate that excess vehicles are not being purchased for Regents fleets. Access to the fleet overflow contract allows the institutions to right size their fleets.

The joint fleet overflow contract also allows the universities to provide one way rentals to and from local airports. In doing so, the contract permits better utilization of the universities' fleets and allows the universities to minimize the number of vehicles each purchases. With access to one way airport rentals, this contract saves ISU more than \$50,000.

A few years ago, the fleet operation at ISU worked with Extension to compare various options for Extension employees' daily travel. Using vehicles rented annually from the fleet operation, rather than reimbursing mileage for personal vehicles usage, Extension **saved more than \$130,000 annually**.

The DOT, DAS and the Regent institutions collaboratively rebid the fuel card program in 2012. This program offers wide acceptance and ease of use; it also provides small rebates on certain fuel purchases over the year and early pay discounts. ISU's average early pay **discounts total \$20,400 per year**. The card also has a variety of safety features that provide extra security against fraud and theft.

Additional joint Regents fleet efficiencies include:

- The Regents are active partners with DAS and DOT in jointly bidding all vehicle purchases each year. Combining quantities provides lower vehicle acquisition costs than can be obtained separately.
- Modifying vehicle disposal practices to either retain vehicles until they reach higher mileage levels and/or an increased age.
- Using expanded disposal practices to include online sales of vehicles scheduled for replacement whenever this approach provides the best rate of return.
- Using departmental leases extensively. Among the Regents institutions, nearly 75% of owned vehicles are placed in annual departmental leases, leaving only 25% of the fleet in daily rental status (At SUI, about 90% of fleet owned vehicles are in annual departmental leases). These annual leases are an excellent low-cost option for departments who need transportation on an ongoing daily basis (e.g.: State Hygienic

Lab, Specialized Child Health Clinics, Parking and Transportation Enforcement). Because vehicles are bought at a low cost, annual leases offer considerable savings when compared to the cost of long-term leasing through car rental agencies or dealers. An additional advantage for institutional customers is that all maintenance and repair costs are included in the monthly rate, allowing for a stable, predictable monthly expense. For example, at SUI a mid-sized sedan lease is \$396 per month, for which Enterprise currently charges \$660 per month. The fleet operation also provides loaner vehicles when annual lease vehicles are being serviced.

- Rate setting strategies have been employed that best serve the types of trips taken by each institutions' customers. These trip types vary by campus and clientele and, as such, so do the rate-setting strategies. Each campus fleet operation has developed rates to take advantage of synergies within the institutions. For example, SUI serves the UIHC while ISU supports Extension services. All three institutions use the same fleet management software and have the same reporting capabilities.
- The Regent institutions also have combined certain vehicle maintenance software contracts under the same license for mechanics' access and use.

University of Iowa -

The University of Iowa reduces parking capital and operating costs by managing employee parking demand through effective rate setting and by supporting van pool, bus pass, car pool, bicycle and car sharing programs as alternatives to driving a single occupant car to work on weekdays. Currently the vanpool program operates 69 vans supporting 712 riders. More than 500 employees are also signed up for a voluntary carpool matching service. The employee van pool program has reduced annual vehicle miles traveled by commuters by more than nine million.

The bus pass program, which allows pass holders to ride on the Iowa City and Coralville transit systems, has 1,650 employees and 1,987 students enrolled.

In August of 2012, SUI added the car share program known as Zipcar, further helping reduce the need for a car on campus. Use of that program has doubled in its first year of operation.

Given current daily utilization rates for the van pool and bus pass programs of approximately 70% for employees and 50% for students, the programs have eliminated the need for approximately 2,650 parking spaces in the University's system; more than 15% of its current capacity. This parking, if supplied in surface lots, would cost the parking system more than **\$1,325,000 annually**. Structured spaces in these numbers would cost nearly four times that. The net cost of supporting the employee and student commuter programs in FY 2013 was less than \$738,000.

Alternatively fueled vehicles (flex fueled-E-85, hybrids and fully electric) in FY 2013 constituted 58.1% of the total SUI Fleet Services Fleet compared to 35.8% in FY 2005; this includes 20 hybrids and 9 fully electric vehicles. Over that same time frame, the consumption of E-85 has grown from 14.7% of total gallons to 32.6%.

Biodiesel use is also increasing at SUI as the 34 CAMBUSES which can be parked inside overnight utilize a 20% mix in warm weather and average 12% annually for its 225,000 gallons; up from 6% in FY2010. The remaining 37 diesel vehicles on campus which are stored outside overnight are averaging 9% biodiesel use across 30,000 gallons.

Newer diesel buses and trucks are using Clean Diesel technologies to reduce particulate emissions. The newest CAMBUSES also are employing the mini-hybrid technology where hydraulic fan clutches are replaced with electric fans for engine cooling and alternators are now air cooled rather than with oil. This is improving bus mpg by 10-15%. CAMBUS, also uses smaller buses where possible on off peak routes to improve overall annual fleet mpg.

When the broader sustainability program is taken into account, there are two important trends to note. Carbon emissions per mile for SUI fleet vehicles (across 7 million miles annually), have been reduced from .868 kg down to .804 kg., and more importantly, the use of ethanol and biodiesel have reduced the non-renewable fuels share of total carbon output by fleet vehicles from 90% down to 78%.

Iowa State University

University Transportation Services has implemented a number of initiatives focused on alternate fuels and alternate fuel vehicles including:

- Doubling the number of hybrid fleet vehicles in the past two years. As policy, ISU bids all vehicles with flex fuel engines, when available.
- Adding four electric vehicles to the university fleet (two trucks and two cars), replacing two F-150 ½ ton pick-up trucks and two sub-compact cars.
- University Transportation Services offers trailer rental to accommodate luggage transportation and allow larger groups to limit number of passenger vehicles.
- Parking Services is reducing the number of law enforcement vehicles by 25% and replacing them with a combination of increasing the bicycle enforcement program, renting vehicles on an “as needed” basis, and instituting a vehicle “buddy up” program

University of Northern Iowa

The University has increased efforts to reduce carbon emissions by:

- Replacing four vehicles primarily used on or around campus with electric vehicles; the elimination of a covered straight truck, two pick-ups and a JD Gator saved:
 - 732.4 gallons of diesel fuel
 - 536.8 gallons of unleaded fuel
 - An estimated \$3,563 annually
- The two Toyota Priuses in the Motor Pool fleet are averaging 18,000 miles annually and, strictly on fuel economy alone, reduce fuel use by 736 gallons a year.
- UNI Motor Pool was the first to work with Enterprise Rental for one-way reservations to airports in Cedar Rapids, Des Moines and Moline, eliminating down time for fleet vehicles and storage fees.
- On August 27, 2010, UNI dedicated the Multimodal Transportation Center (MTC). This net-zero cost center ties together several modes of transportation and it is a collaboration among UNI, the City of Cedar Falls, the City of Waterloo and the Metropolitan Transit Authority. The facility is a stop for three separate public transit systems, provides easy access to the area bike trails, and supplies needed additional

parking for the campus community and visitors. The Center received the 2010 Development Partner Award from the City of Cedar Falls and Cedar Falls Utilities

Iowa School for the Deaf

ISD purchases vehicles and fuel through ISU.

ISD has limited the use of motor vehicles for on-campus purposes; replacing them with electric service vehicles, including golf carts.

Iowa Braille and Sight Saving School

IBSSS purchases vehicles and fuel through ISU.

The Iowa Braille School has leased 5 Ford Focus's, purchased 10 Ford Focus's and 3 Ford Impalas all the vehicles are E85 fuel compatible. These vehicles have replaced high mileage/non E85 compatible vehicles. Statewide staff has been added which offsets a straight trade off in savings from retiring older vehicles.

c. OTHER

Banking

University of Iowa

- International Receivables: Given the size of the international student population, the University began offering an international wire service payment option that reduced the number of international wires by 50% and resulted in a reduction in bank fees and associated administrative burden estimated at \$5,000.
- Departmental Cash Deposits: The programming of workflow and data file exchange for daily departmental bank deposit preparation and automated bank reconciliation and general ledger posting was upgraded in FY 2013 and resulted in fewer errors, less rework and overall administrative time savings equivalent to .5 FTE.
- Remote Deposit: Scanning of checks for deposit at various locations across campus has accelerated the timing of bank deposits. In addition to increasing fund availability, check scanning eliminates the need for armored car service in these locations, reduces staff time away from workstations and increases administrative efficiency since electronic images are readily available. Total annual savings is \$20,000.
- Earnings Credit: Daily cash management processes were adjusted to take advantage of bank earnings credit in the prolonged low interest rate environment. This resulted in reducing bank fees by \$15,000 in FY 2013.
- Investments: In addition to UNI, cash and investment balances of SUI-related affiliates have been pooled with the University of Iowa, reducing investment fees for all participants. Also provided to these partners and affiliates is access to investment strategies that would be otherwise unavailable; the three SUI investment pool options provide the potential for increased returns while reducing investment risk. **Fee reductions are estimated at \$90,000 annually.**

In other business operations, SUI:

- Paperless “Electronic Financial Reports” are created, distributed, and reviewed online. 531,988 unique transaction detail reports are generated online annually, and 1.4 million individual electronic copies are distributed annually.
- General ledger and budget interfaces provide an efficient front-end for key financial processes. Annually, 20,396 original entry journals are posted to General Ledger, and 22,569 budget reallocations are completed online.
- SUI Billing & Collections: University Billing & Student Aid Refunds - Since FY 2009, all student, faculty and staff billings are electronic, **generating annual cost savings of \$215,000** over paper bills and postage expense. With each new freshmen class there is an active campaign to encourage all students to sign-up for electronic bill payments. This same campaign encourages students to sign-up for electronic receipt of any student aid refunds. Participation in these electronic options is over 90%. In addition to the convenience of charging on-campus purchases to their University Bill, all faculty and staff charges are automatically payroll deducted. Total cost savings of these electronic payments is estimated at \$250,000 annually. Accounts Receivable & Collections - In response to the economic downturn and observed rise in delinquent accounts, SUI developed an earlier and more robust in-house collection effort on former student receivables, accelerating payments, reducing external collection fees, and reducing bad debt. External collection costs were reduced by \$100,000 and collections on delinquent accounts receivable increased by 20%. **Annual net cash flows have improved by over \$500,000.**
- SUI Identification and Badging Operations: The functionality of the University of Iowa photo identification card, the Iowa One Card, continues to be expanded. In addition to accessing residence hall services like meal plans and laundry services, students now can use the card to open doors in residence halls, learning centers, and recreational facilities. In 2012, contactless card (prox) functionality was added to student, faculty and staff cards. Building on use of the Iowa One card magnetic stripe for door access, this single card now supports access to campus buildings protected by prox technology. Granting and removal of access controls has been automated for 6,000 students in the residence halls and for all students for the Learning Commons. The single card campus provides convenience for the SUI community; improves the security of campus buildings; eliminates duplication of card distribution and management responsibilities; and reduces overall costs for plastic cards. Also, many campus events have been able to use the Iowa One Card’s technology to eliminate paper ticketing. In addition to allowing on-campus charging at the book stores, convenience stores, and food service, individuals may link cards to a checking account that provides for surcharge-free ATMs across campus. This option also allows the Iowa One Card to be utilized for PIN-based transactions off campus for items such as groceries and gasoline.
- In FY 2011, SUI ID Card Operations assumed responsibility for the production of UIHC badging operations, and the future integration of the UIHC badging system with current University data base systems in coordination with ITS. This consolidation eliminated duplication of effort and systems inefficiencies, both current and in the future.

Iowa State University

Promoting the use of electronic payments allowed ISU to:

- Close its lock box account, decreasing bank fees. From FY 2001 to FY 2010 there was a 48% decrease in checks deposited, 60% decrease in checks paid, and a 98% increase in ACH (electronic) transactions
- Save over **\$189,000** annually in postage and printing in FY 2010 as 305,000 or 84% of all u-bills were accessed electronically
- Allowed the Treasurer's Office to eliminate one full time position in FY 2010 as 92% of all student u-bill payments were made electronically (Iowa State University does not accept credit cards for u-bill payments) and 91% of student refunds were direct deposited.

In other business operations, ISU:

- Created and implemented the electronic Iowa State University Educational Gift Certificate in FY 2009. The Gift Certificate was created to give students another option in lieu of loans to finance their education. Also, given the current economic climate with limited financial resources for gift givers, the gift certificate allows the gift giver to give a practical gift, a gift of education. The electronic gift certificate also promotes sustainability. Since inception 196 gift certificates for a total amount of \$91,767.92 have been purchased for the benefit of students (www.giftcert.iastate.edu).
- Distributed 94% of IRS 1098-T Educational Tax Credit forms electronically **saving \$49,000** through the ISU e-business electronic consent program.
- Decreased the collection cost expenditure to ISU by more than **\$140,000** per year for the past five years through the ISU e-business electronic consent program.
- Combined the magnetic stripe and proximity card to create a campus One Card (ISU Card) in FY 2009. The ISUCard verifies status as an ISU student, faculty or staff member and provides access to university services and facilities, such as AccessPlus and the Lied Recreation/Athletic Facility. The ISUCard is a building access card, which permits entry through the campus gates, campus buildings, and residence halls. The ISUCard is a passport to ISU Library services. CyCash is another feature of the ISUCard; a secure, online system that can be used to make small dollar purchases on campus. CyCash acts just like money, eliminating cash handling on campus and can be used at a variety of on-campus locations, such as the Vending Machines, Memorial Union Food Court, ISU copy centers, University Book Store, Copy Machines in the Library, Department of Residence C-Stores, Laundry Facilities, Dining Facilities, and Copiers.
- Distributed 68% of employee W-2s electronically, saving \$7,000 and 80 staff hours annually.
- Streamlined employee reimbursement process using electronic receipts, saving 50,000 sheets of paper, and speeding up time to reimbursement by 3 days.
- Implemented in-house imaging for accounting transactions reduced cycle time by 4 days and for financial aid improved workflow and document storage.

University of Northern Iowa

The University of Northern Iowa manages and invests with the University of Iowa endowment, saving fund management fees.

The University converted check deposits to ACH, which reduces the amount of time for payments to clear the bank thereby increasing deposit balances allowing for more interest generation.

The University now receives over 57% of student payments electronically, resulting in reduced banking fees and a reduction in staff resources required to post payments.

Student refunds processed via ACH exceed 60% which has reduced banking fees, printing and US postage costs.

Employee reimbursement and supplier payments issued via ACH have reduced banking fees and printing and mail expenses.

Payroll paid via direct deposit is at a combined rate of 97% to student and regular employees. Direct deposit statements are available electronically which has reduced printing and internal mail costs. and management fees.

Printing -

University of Iowa –

In 2011, the Printing and Mailing Services department was restructured; seven full time positions were eliminated and the employees reassigned within the University. Non-essential coin-operated copier machines in the Library system were eliminated. Services and pricing models were revised to meet the current needs of the University. Copy center printing equipment leases were ended and new leases for equipment that better matched the new business model were signed. **Over \$500,000 in annual salary savings was achieved as well as an additional \$50,000 in equipment savings.**

In 2012, the Printing and Mailing Services department was engaged to print UNI's business cards, letterhead, W-2's and envelopes, which was in addition to various other printed material SUI provided to UNI, i.e. athletic tickets, 1099's and 1098's.

Also in 2012, UIHC contracted with the Printing and Mailing Services department for their billing and appointment letters. Providing this service reduced costs to UIHC and enabled the billings to arrive 2-3 days sooner at patient homes.

SUI recently issued a competitive bid for copy and print paper for SUI, ISU, UNI, IPI (Iowa Prison Industries) and DOT (Iowa Department of Transportation). Proposals are currently being evaluated.

Student computer labs require the use of "print stations" that will hold documents for up to 24 hours. Students must enter their Hawk ID information before the document is released for printing, a process that has dramatically reduced unnecessary printing.

The mainframe computing system was retired in spring 2013. As part of the retirement process, the central printing service was eliminated and 200,000 pages per month were eliminated. Most information is now presented electronically directly through applications or

are distributed through the Electronic Financial Reporting system. In the fall of 2013 the University stopped printing University Phone Books and began publishing all student, staff, faculty, collegiate, departmental, and business unit information only in electronic format.

Iowa State University

- From FY2012 to FY2013, Printing & Copy Services has transitioned over 800,000 print impressions from offset presses to digital presses resulting in material and time savings in ISU's operation, as well as on-demand efficiencies and waste reduction for e campus customers.
- Used Printing's mail pre-sort software to pre-sort and address mail pieces to achieve highest postage discounts possible. Generated **\$919,373** dollars of postage savings for campus departments in FY2013.
- With both in-house and off-campus orders, over 70% of proofs are now transmitted electronically rather than by sending hard-copy, resulting in material, shipping, and time savings.
- Worked with Student Financial Aid to transition access to scholarship, award, and financial information for enrolled students to AccessPlus. Also worked with ITS to develop a template to report those figures via e-mail to incoming students without AccessPlus availability, eliminating the cost to print and mail statements.
- Consolidated copy center locations from four to three, reduced full-time employees by three and student workforce by eleven, while continuing the same level of service to the campus community and realizing the resulting wage and facilities cost savings.

University of Northern Iowa

UNI eliminated the printing department after determining it would be more cost effective to utilize other options. UNI engaged SUI Printing and Mailing Services department to print UNI's business cards, letterhead, W-2's and envelopes, which was in addition to various other printed material SUI provided to UNI i.e. athletic tickets and 1098's. Additional printing is done through a competitive bidding process.

- The University sends electronic monthly accounting statements and reports rather than paper copies, thereby saving printing and postage costs.
- Student u-bills are sent electronically, reducing printing and internal mailing costs.
- Computer faxing and emailing purchase orders to vendors have saved printing and mailing costs since implemented in FY 2009.
- Providing electronic or CDs of budget books instead of printing these documents saved the University approximately \$10,400 in FY 2010 and FY 2011
- Since implementing electronic timecards in 2005, approximately 80,000 paper timecards have been eliminated annually.
- UNI is piloting print stations that will hold documents until release by students, thereby eliminating excess printing.
- The University of Northern Iowa benefits from having mail service sent to the University of Iowa mail service for sorting and transmittal to the U.S. Post Office.

Bonds

Periodically, the Board's financial advisor, Board Office and Regent universities evaluate bonds for refunding potential. When interest rates are low, bonds can be refunded and annual and total debt service costs can be reduced. Since calendar year 2008, the present value savings from the issuance of Board of Regents refunding bonds totals more than **\$27 million**.

Working with the Office of the Auditor of State and bond counsel, the Regent universities consolidated bond audit reports resulting in **reduced external audit costs of \$100,200** per year

2. IT SERVICES AND OPERATIONS

Information Technology is deeply integrated into the core missions of the universities: teaching, research, and service. The technology required to support cutting-edge research or provide engaging educational experiences for tens of thousands of graduate and undergraduate students is complex and unique. In order to be successful, the universities must design, develop, integrate, and operate their systems in ways that are tailored to and focused on their core missions. IT also plays a critical role in patient care and the efficient operation of the University of Iowa Hospital and Clinics.

The universities are successfully managing information technology and keeping pace with the explosive growth and use over the last 10 years. This has been accomplished with essentially flat budgets by constantly employing new efficiencies and increased effectiveness. Long term, the most value will be in the continued collaboration and avoidance of future costs through reducing duplication of effort, sharing solutions and ideas, and jointly implementing new technologies.

Major efficiencies in IT include:

- *BOREAS-Net* – SUI and ISU, along with the University of Minnesota-Twin Cities, and the University of Wisconsin-Madison have developed a very high-speed regional optical network to support education and research. *BOREAS-Net* provides connections between the universities and national research networks as well as access to low-cost Internet bandwidth in Chicago. The Regent universities supply bandwidth to the state's ICN thereby allowing the ICN to reduce costs. This results of **savings of more than \$2,000,000 annually**.
- Server Virtualization – All three universities have aggressively pursued server virtualization. Virtualizing a traditional server can save hundreds to thousands of dollars in initial costs and several hundred dollars a year in operational costs. Virtualization can result in a 20-to-1 or higher reduction in the number of physical servers, which significantly decreases costs for maintenance, support, and utilities. Current annual savings for each of the virtual servers is estimated to be about \$1,000. The use of servers across the three campuses continues to grow and currently exceeds more than 2,500, resulting in **annual savings of more than \$2,500,000**.

- PC Bid – Working with purchasing departments, this award to Dell resulted in desktop PC prices more than 50% below standard higher education discounted prices, and about 20% less than any other government or purchasing group pricing to which the universities have access. It is estimated this single joint contract **saves more than \$2,440,000 annually.**
- ProTrav – SUI Procurement and Travel System Implementation at UNI. ProTrav is an SUI internally-developed application designed to manage procurement card and travel expenses. SUI and UNI have a signed Memorandum of Agreement and the project was kicked off in March 2013 with a proposed implementation in FY 2015.
- Cyber Security – A joint Regents/DAS group meets quarterly to discuss security standards to minimize the number of successful cyber-attacks. This collaboration reviews standards, discusses lessons learned and explores the possibility of sharing technologies.
- Regents Legislative Requests Database – Designed by SUI, a database was developed for use by SUI, ISU, UNI and the Board Office to track legislative requests for information, legislative studies and bills in a timely and effective manner. Modifications are made annually.
- Data Offsite for Disaster Recovery – UNI has located data servers in ISU's data center as an off-site location for critical data for disaster recovery purposes. This strategy provides physical separation of backup data without a need to lease commercial facilities and provides savings. UNI is also reviewing space needs with SUI where costs run approximately \$10,000 per rack; a private data center would cost closer to \$30-\$40,000 per year.

Peer Comparisons

Another indication of efficiency can be found in comparison with peer institutions, where all three universities consistently rank near the top in terms of productivity and efficiency:

Consolidated E-mail	UNI Rank	ISU Rank	SUI Rank
ITS <u>funding</u> per faculty, staff and student	2 nd Most Efficient of 9 Peers Reporting	3 rd Most Efficient of 11 Peers Reporting	2 nd Most Efficient of 8 Peers Reporting
<u>Headcount</u> supported per FTE ITS worker	3 rd Most Efficient of 9 Peers Reporting	2 nd Most Efficient of 11 Peers Reporting	1 st Most Efficient of 8 Peers Reporting
<u>Computers</u> supported per FTE ITS worker	3 rd Most Efficient of 9 Peers Reporting	2 nd Most Efficient of 11 Peers Reporting	1 st Most Efficient of 9 Peers Reporting

University of Iowa

- New Student Information System – In the winter of 2013 the University completed the implementation of a new integrated student information system based on contemporary technologies, re-engineered business practices, new features and functionality, and advanced reporting, replacing the 30-year-old mainframe system.. In addition to the standard student information system components (Admissions, Student Records, Financial Aid and Billing), SUI implemented systems for student relationship management, events management and orientation.

- Mainframe Computer Retirement - The University has had a mainframe computer on campus for 35 years providing administrative and academic solutions hosting over 100 different systems and 1000s of applications and batch processes. With the advent of client server computing in the late 1990's and web-based systems in mid-2000's, SUI began transitioning applications to more contemporary platforms and technologies. The University leveraged its investment in existing PeopleSoft Finance and Human resources solutions, purchased replacement systems whenever possible, and developed new system when necessary resulting in **savings of more than \$800,000 in annual hardware and software costs**, and the reallocation of 29 staff lines over the past 10 years.
- Identity Management – The University has a central identity management service that is tightly integrated between UIHC and SUI and with human resources, financials, research and student information systems. The identity management system tracks all SUI students and employees and automatically provisions and de-provisions university IDs and login credentials (IDs and passwords) to better manage system authentication, authorizations, and services, increasing efficiency and decreasing risk. In a typical year SUI ITS manages over 200,000 electronic identities for faculty, students, staff and prospective students.
- Unified Electronic Workflow (UEW) – In 2010 a collaborative project was initiated with Finance & Operations and Information Technology Services to enhance and unify current campus electronic Workflow systems by creating a single Universal Electronic Workflow system for campus. The primary goals are to unify systems, provide electronic workflow mechanisms for all potential internal and external approvers (e.g. The Board of Regents), and to accommodate diverse business processes. The electronic transactions in FY 2013 were 777,695.
- Electronic Research Administration (eRA) – in spring 2012, a new system was installed that will transform research administration and enhance the University's ability to procure, administer, monitor research grants and contracts, and meet the increasingly complex regulatory requirements for research grants and contracts. The primary goal of the new system is to create a system that integrates research administration across the complete grant lifecycle from proposal development to award of the grant or contract while minimizing time spent on research administration.
- Improved departmental IT support - The University of Iowa has undertaken two pilot projects to both improve the quality of IT service delivery and to reduce expenses. Four major administrative units volunteered to have their entire IT support models analyzed to look for opportunities for improvement. The result included the elimination of local help desks, transitioning servers and server support to more efficient virtual environment, improved end user support models and shifting of application and web development and support to central providers. This activity is being expanded to other departments.
- Inventory Control – In 2010, consolidation of legacy inventory control systems into PeopleSoft Financials ERP system began. This leverages the investment in this system and retired 8 other systems. Since then inventory control has been implemented in 18 additional business units. improving efficiency and accuracy. Additionally, it allows the

University to track lot and serial controls for use with medical materials (implants and pharmaceuticals). The University is currently implementing this system to help manage the surgical suites.

- Supplier Contract Management – In 2010 SUI implemented a contract management system within the PeopleSoft Financials environment. This contract management system serves as a document management system and repository, complete with authoring capabilities, clause templates, a versioning system, and approval system. This was originally implemented for purchasing contracts and has now been extended to business contracts. The system currently manages over 7,500 contracts.
- Centralized Web Site Hosting and Development - SUI standardized on a common centrally-provided web content management system, Drupal, eliminating the need and cost of departments and colleges running their own systems. A central chargeback service is in place to build and maintain websites for the campus and be self-sustaining.. It also allows varied expertise to be collocated in one group and then used throughout the campus as needed... Over 50 web sites have been migrated into this new system.
- The University of Iowa utilizes PeopleSoft Financials and Human Resources ERP applications to support both the General University and University Hospital and Clinics (UIHC). . Inventory control services are provided for 26 department inventory units including the Pharmacies, Pathology labs, Process Stores, Material Services, and Central Sterilization. Inventory interfaces are provided to the Main Operating Room, Ambulatory Surgery Centers, clinical dispensing units, and pharmacy systems. From a purchasing perspective, automated purchasing processes are provided for pharmaceutical and medical supplies through direct interfaces to suppliers and aggregators. Direct interfaces to the UIHC Clinical and Patient Billing systems were also developed to streamline billing operations and produce economies of scale savings for the entire University.
- UIHC also utilizes the full suite of SUI human resources applications including payroll, benefits, recruiting, hiring, and self-service portal, again producing economies of scale and optimum efficiency.
- Facilities Maintenance (FM) servers were moved to ITS. The cost of ITS service is about \$40,000 per year. Servers are normally replaced every 5-7 years. FM is saving **approximately \$400,000.**
- At the infrastructure level, UIHC leverages central ITS system and database resources for specialized Oracle hosting and database administration support for some administrative applications. The General University and UIHC exchange, share, and leverage IT infrastructure and services with the following examples:
 - A newly constructed data center, the Information Technology Facility, was jointly planned, constructed, and now operated jointly by UIHC and the central IT unit on campus.
 - The campus network and external network connectivity are operated by the central IT unit on campus but used by UIHC to for external network access.

- Parts of the email infrastructure, including spam and virus protection are operated by the central IT unit and used by the entire university, including UIHC.
- The University's Active Directory system, which houses electronic identities and passwords, has been jointly operated by UIHC and central IT since 2001.
- The University's on-line course management tool, ICON, is used by UIHC for staff training in compliance and other areas. UIHC has more than 400 active on-line courses within the system and almost 3,000 video files for compliance training on the University's video server.
- A new distributed antenna system project to provide better cellular coverage inside buildings is being led by UIHC and includes the University. This multi-year project is still ongoing.
- UIHC will be leveraging the on-line IT training system the University has been using for several years. This system is now being used more than 100,000 times per year to provide "just in time" training for faculty, staff, and students on how to use IT software and systems.

Iowa State University

- ITS continues to expand campus cloud services, most prominently virtual servers, data storage, and "thin client" replacements for select desktop and lab computers. ISU now has more than 800 virtual servers that **save the university \$750,000 annually**.
- Many IT support services have become collaborations with colleges. Examples include SharePoint; storage; desktop/laptop support; a common "trouble ticketing" system; an IT Handbook that creates common best practices for all staff; and better management of software licenses. Some services are now co-managed and co-funded, and a few college IT professionals have been embedded in ITS to improve response time and improve service.
- ISU recently installed a cloud-based "Voice over Internet (VoIP)" telephone system that will **save the university \$600,000 each year**. Iowa State is, in fact, the first educational institution in the country to switch its entire telephonic system to Aastra in the cloud using Internet2.
- Quali software for financial services and research administration – the largest IT project in Iowa State's history – **will save \$8.5 million in licensing and consulting fees over the next 10 years**. ISU anticipates similar levels of savings, up to 50 percent, as other Quali modules are implemented in the future.
- For high performance computing, the operational and business components are run by ITS, but policy and technical aspects are governed by a faculty group. The consolidation of multiple clusters and the coordination of future purchases will enable faculty to benefit from a shared team of HPC support staff and alleviate the need to build smaller, redundant data centers in colleges and departments for HPC equipment. This means **savings of approximately \$200,000 per year** in salary and benefits, plus utility savings, beyond the approach ISU was following last year.

- Faculty and staff lists are now available online, and no longer printed in the Dex and Yellowpages phone books.
- ITS **saves \$85,000 annually** by provisioning a centrally managed antivirus solution, third party patch management, central group policy, whole disk encryption, OS updates, and application deployment, imaging, and reporting through the System Center Configuration Manager.

Iowa Braille and Sight Saving School

The Iowa Braille School purchased a new General Ledger System (Microsoft Great Plains Dynamics) in FY 2009; the old General Ledger System was DOS based. Efficiencies were gained.

The School is currently in the process of installing a Microsoft Exchange Server to consolidate all email function in-house (i.e. many of the statewide Orientation/Mobility Specialists and Teachers of the Visually Impaired are on local AEA email addresses). Efficiencies will be gained.

See Appendix 2 for details

3. PERSONNEL AND BENEFITS

EARLY RETIREMENT INCENTIVE PROGRAMS

To achieve long-term savings, the Regent institutions offered an Early Retirement Incentive Program beginning in FY 2010. Estimated outcomes follow:

- SUI: 428 participants at \$80.6 million in savings over 5 years of the programs
- ISU: 367 participants at \$77.5 million savings over 5 years of the programs
- UNI: 117 participants at \$16.9 million savings over 5 years of the program
- ISD: did not have any participants
- IBSSS: 2 participants at \$617,000 over 5 years of the program

HUMAN RESOURCES

Regent institutions have implemented procedures to enhance the efficiency and productivity of HR operations as reported below.

University of Iowa

UI Self Service is a robust campus wide vehicle for communicating employee information, and has administrative applications that provide departments and managers with data applications and tools to increase their efficiency and effectiveness.

The UI Self Service Employee Portal, created in 2001, is used regularly by over 98% of University of Iowa faculty, staff, and student employees (36,000 users/year) to access Payroll, Benefits, and University information and perform numerous HR actions, including 10,000 online benefits enrollments and 145,000 electronic time records each year. HR Transactions processed on this site number 76,000 per year, and the 185 online reports available to administrative staff are reviewed 445,000 times each year. The University of Iowa Workflow System facilitates the online routing and approval of 280 different transaction

types for HR, Purchasing, Travel, Business Services, Facilities, Health Care, Research functions, processing over 777,695 such electronic forms in a given year.

There are 941 online and in-person courses offered via “My Training”, registering over 44,350 enrollments per year. Online ePersonnel files include a variety of information for 27,684 employees, and 7,207 documents have been digitized for inclusion in these files during 2013.

The Jobs@Ulowa application website has incorporated process improvement and efficiencies for applicants and employers across the University, and is the starting point for a systematic on-boarding process to improve recruitment and retention. The Jobs@Ulowa employment website has welcomed 409,000 annual visitors and 103,949 individual job applicants since 2005.

Lean activities – In CY2012, 88 Lean projects were completed. As of mid-September, 84 Lean projects have been completed this year. Examples of Lean projects/results are:

- Clinical Trials contract negotiation time reduced 77%.
- Building Project Accounting Capitalization process streamlined
- Pharmacy Prescription Processing mail-out lead times reduced 89%.
- eDeposit daily deposit process reduced staff time by 80%.

The University is finalizing a contract with an external firm to review opportunities to adopt a shared services model for certain university functions.

Iowa State University

ISU provides a full set of integrated secure services through the web portal (AccessPlus) for employees (faculty / instructor / advisers as well as business services), students, and affiliated third parties which give departments, employees, and students access to critical data.

University of Northern Iowa

The University implemented Jobs@UNI, a web based applicant tracking system involving a partnership with the University of Iowa. The Jobs@UNI website (implemented in collaboration with UNI utilizing software systems created by SUI) has registered 6,732 active users, of whom 5,840 have applied for at least one of the 292 job openings posted since July 2012. The Jobs@UNI application website has provided job advertisements, facilitated applicant tracking, and streamlined search activities for Faculty, Academic Administrator, Professional and Scientific, and non-Academic Administrator positions at the University of Northern Iowa since July 1, 2012.

UNI implemented advertising packages resulting in **over \$40,000 in campus savings** on job advertising costs in FY 2013, the first year of the program.

A successful partnership occurred with Iowa State University on a joint RFP to select a new flexible spending vendor, ASI Flex. The awarded contract has resulted in enhanced services for employees and a reduction in administration fees.

Since 2008, UNI has formalized a partnership with SUI Immigration Services where UNI has access to the counsel of SUI's immigration attorney and expert staff for complex employment-based immigration issues.

UNI created an electronic Personnel Action Form (PAF) and Student Employment Approval Form (SEAF) using workflow technology to route

Iowa School for the Deaf has eliminated 12 staff positions. With the retirement of the Chief Financial Officer in FY 2013, the job was incorporated into the existing CFO duties at IBSSS.

Iowa Braille and Sight Saving School

The Human Resource Department has reduced a HR Specialist position from a 1.0 FTE to a .6 FTE, savings **\$23,500**

BENEFITS

University of Iowa

See Appendix 3

University of Northern Iowa

UNI officials contracted with Buck Consulting to review the health and dental insurance programs currently being offered and make recommendations relative to cost-saving changes.

UNI offers its students health insurance coverage through the University of Iowa student health insurance plan.

4. FACILITIES and SUSTAINABILITY

University of Iowa

EFFICIENT BUILDINGS

The University of Iowa is committed to sustainability in its campus development through the incorporation of green principles in the placement, design and construction of new campus facilities and major renovation projects. The widely recognized Leadership in Energy and Environmental Design (LEED) program encourages sustainable building practices. The University maintains a minimum standard of LEED Silver certification for new construction and major renovations.

SUI LEED BUILDINGS AT A GLANCE

Projects Completed	LEED Level	Status
Beckwith Boathouse 2009	Gold	Complete
Sports Medicine Clinic 2009	Gold	Complete
State Hygienic Laboratory 2010	Gold	Complete
Stuit Hall Renovation (formerly Old Music Building) 2011	Gold	Complete
IT Facility/Data Center 2011	Platinum	Complete
Dental Science Building Addition 2011	Gold	Complete
College of Public Health Building 2011	Platinum	Complete

Carver-Hawkeye Arena Addition/ Renovation 2011	Gold	Complete
Projects In Progress	LEED Goal	Status
Pappajohn Institute for Biomedical Discovery Building	Silver	Construction
Hancher Replacement	Silver	Construction
School of Music Replacement	Silver	Construction
Art Building Replacement	Silver	Construction
Football Operations Facility	Silver	Construction
West Campus Residence Hall	Silver	Construction

- Energy efficiency, long a component of SUI design standards, has been quantified through the Commercials New Construction programs offered by MidAmerican Energy and Alliant Energy companies. The programs include all major new building construction and renovation projects. The campus has received \$2.5 million in incentives from MidAmerican Energy and Alliant Energy (IPL) for completed projects. Energy efficiency projects under this program have an **annual cost avoidance for the campus of \$2.63 million.**
- The University of Iowa is using energy savings from completed energy projects, as well as rebates from the MidAmerican Energy and Alliant Energy incentive programs, to create a revolving fund for reinvestment in additional energy efficiency projects that will lower annual utilities expenses.
- The University of Iowa uses BuildUI, a web-based, comprehensive capital project budget and accounting system. BuildUI serves as the central depository of project information and is a tool that constrains budget overruns, minimizes budget revisions, and promotes budgetary compliance by providing real time data, tied directly to the SUI general ledger. Other benefits include the reconciliation of all projects monthly and improved communications with University stakeholders, and designers and contractors. Use of this system to handle the current capital project workload **avoided the need to hire at least 3 administrative staff FTE** at an annual cost of \$175K. Build UI is currently being implemented at the UIHC
- A liaison group, which includes representatives from the Board of Regents Office, the three Regent Universities, and representatives from Master Builders of Iowa, meets regularly to discuss proposed legislation, process improvements, and ways to improve the delivery of capital projects that will best serve the interests of both the industry and Regent institutions.
- SUI is currently piloting two Design-Build projects authorized by the Regents. Construction on the first, Hawkeye Campus Indoor Turf facility, was recently initiated. The expectation is to save cost and time for certain types of projects. An evaluation will be made as the projects proceed.
- Outreach efforts by Facilities Management to in-state contractors over the past year and a half has yielded positive results in elevating competition and the participation of Iowa contractors for the current project workload. Thus far, major projects remain on budget and the substantial majority of competitive awards have been made to Iowa companies.

ENERGY MANAGEMENT

- SUI is pursuing a renewable energy supply strategy that optimizes long-term supply and fuel price stability while preserving an ability to test and take advantage of other potential fuels. Substituting biomass (oat hulls) for coal in Boiler 11 at the main power plant has allowed the University of Iowa to **avoid costs of about \$670,000 annually**. The recently completed retrofit of Boiler 10 will allow the use of biomass, natural gas or coal depending on cost, availability and desired fuel mix. This is anticipated to avoid costs of **over \$1 million annually**.
- SUI has established the goal of consuming less energy on campus in 2020 than consumed in 2010, despite projected growth. The General Fund buildings currently are consuming 7.4% less than in 2010, which translates into a **savings of just over \$1 million** in purchased fuels and electricity.
- The SUI Energy Control Center, established in 2010, was recognized internationally with an APPA Effective & Innovative Practices Award. It serves as a centralized location for the monitoring, analysis, and forecasting of energy supply and consumption across campus. Cutting-edge energy management software enables energy engineers to optimize the production and distribution of steam, electricity, and chilled water which reduces costs. Initial savings have **exceeded \$500,000 annually** and are projected to significantly increase over time as the full potential of the center is realized.
- The Energy Control Center is working with the National Institute of Standards and Technology (NIST) to test their Fault Detection and Diagnostics software for building automation systems. This software is designed to keep a building operating as efficiently as possible and to alert operators to any problems in the building heating ventilation and air conditioning (HVAC) systems.
- The University of Iowa/Oakdale Research Park Campus utility system is undergoing modernization into a state-of-the-art district energy system in order to provide a cost-effective, reliable renewable energy source. The goal is to operate on 100% renewable energy. In 2012, POWER magazine named The University of Iowa Research Park Tri-Generation Power Plant as a top plant, and it has also been recognized for engineering excellence by the American Council of Engineering Companies (ACEC). The plant includes a small gasifier for College of Engineering research on the combustion characteristics of various renewable alternative fuels. District heating at Oakdale is **currently saving \$150,000 annually**, and that amount will increase when construction of the plant is completed in 2014.
- The SUI Energy Hawks program, a quick-hit internal team launched in FY 2010, focuses on evaluating and resolving energy issues in buildings has, to date, reduced the annual campus energy budget by nearly **\$1.5 million**. The program is now being expanded to retro-commissioning.
- An integrated Facilities Management team has been created to focus on the energy management projects in support of SUI goals on energy reductions. In FY2013 this group's energy projects realized a total projected savings of **\$1.9 Million**

- Since the Steam Trap Survey plan was implemented in November 2011, **over \$300,000 in steam loss savings** and over 6,000 tons of emissions reductions have been identified.

WASTE MANAGEMENT

- The University of Iowa has set an aggressive sustainability goal to reduce overall campus waste and attain a 60% waste diversion rate by the end of the decade. This is expected to **save about \$90,000 annually**.
- Individual events provide learning opportunities and divert waste from the landfill. For example, the SUI Dance Marathon team of volunteers, event organizer efforts, and dancer cooperation diverted 1440 pounds of compost from the Iowa City Landfill. At Kinnick Stadium in 2012, 52% of waste was recycled or composted thanks to students, parents, and coaches of the Iowa City Booster Club and the SUI fraternity Delta Tau Delta.
- Hillcrest and Burge Market Places, the Iowa Memorial Union catering services and Athletics **divert about 140-tons of food waste per year from the landfill**.

WATER MANAGEMENT

- SUI centralized its chilled water production which has reduced water and steam use, ultimately **decreasing production costs by \$360,000 per year**. SUI has incorporated a reverse osmosis (RO) system that allows boiler water to be used longer with less corrosion-avoidance chemical additives. River water is now used for non-contact cooling water for condensers; SUI's permit to release non-contact cooling water to the Iowa River is **saving \$1 million per year**.
- SUI installs water saving devices (toilets, washing, showers, etc.) in new and remodeled spaces.
- SUI employs an irrigation system with a moisture sensor so that water is applied only when soil moisture levels indicate a need.

SPACE MANAGEMENT

- The University of Iowa utilizes the Space Information Management System (SIMS) using ATG space management software to provide one central and reliable record of all university space. This data is used to calculate building replacement values, operating costs and indirect cost recovery determinations. It also provides data and graphic information critical to early capital project planning
- The University retained ISES Corporation to provide consistent inspections and detailed condition analyses for existing facilities. The database provides effective information for planning the repair, replacement and renewal of major facility components.
- . The University has formalized the use of a total cost of ownership decision-making framework for the consideration of various alternatives that may include renovation, improvement, or demolition of existing facilities. In situations where building removal is considered, historical value and heritage is carefully weighed. When renewal will not result in useful space configurations or will prolong the inefficient use of existing land, a building may be considered for removal. This approach has resulted in reducing the

backlog of deferred maintenance. For example, the demolition of Oakdale Hall produced a **net savings of \$800,000 annually** and **eliminated cumulative deferred maintenance of \$38 million**. In other cases, such as Chemistry and Stuit Hall, the building evaluation and functionality assessment led to the decision to renovate rather than demolish.

Iowa State University

EFFICIENT BUILDINGS

Since 2008, ISU has adopted the goal for all new buildings and major remodeling to be certified LEED Gold or better. At this time, two buildings on the ISU campus have received LEED certification and all new construction is registered with the United States Green Building Council for future certification. Minimum LEED (Iowa State specific) standards have been incorporated into the Campus Design Manual and Standards for all capital projects. All project bid at Iowa State are expected to incorporate these standards, even if they are unable to file in a traditional LEED category.

ISU LEED BUILDINGS AT A GLANCE

Projects Completed	LEED Level	Status
Morrill Hall Renovation (2008)	Silver	Complete
College of Design – Foundations Pavilion (2010)	Platinum	Complete
Chemistry Facilities (Hach Hall)	Gold	Complete
Biorenewables Complex-Biorenewables Research Lab	Gold	Complete
Recreation Facilities Expansion and Renovation	Gold	Complete
College of Veterinary Medicine Ph.2 – Small Animal Hospital Renovation and Addition	Gold	Complete
Projects in Progress	LEED Goal	Status
Curtiss Hall – Harl Commons (interiors)	Gold	Construction
Curtiss Hall – Student Services Mall (interiors)	Gold	Construction
Agriculture and Biosystems Engineering Building	Gold	Construction
Football Training Facility	Silver	Construction
Troxel Hall	Gold	Construction
Hansen Agriculture Student Learning Center	Silver	Construction
Lagomarcino Hall Office Remodeling (Interiors)	Gold	Design
Morrill Hall (existing buildings)	Gold	Design
Biocentury Research Farm (existing buildings)	Silver	Design
Marston Hall Renovation	Gold	Design

In 2013, Iowa State University completed a series of project that included major additions and remodeling of the College of Veterinary Medicine Complex. At the same time, Utilities replaced the chiller plant and installed a new boiler plant and eliminated over 5,000 feet of buried steam line that served this facility from the main campus steam system. The projects were funded with project funds, Utility funds and an ARRA grant. The energy savings resulting from these projects is significant. The complex gross square feet increased by 34%, while the actual energy input to the facility was reduced by nearly 25%. In addition to the savings in the Vet Med complex itself, elimination of the buried steam line reduced campus steam system losses by 37%, a **direct cost savings to customers of nearly \$600,000 per year**.

Facilities Planning& Maintenance (FP&M) completed a lighting replacement project at Applied Science Buildings II and III. Energy consumption for those two buildings was reduced by approximately 10%. This project was partially funded with ARRA grant funds.

FP&M completed a chiller replacement project at the Applied Science Complex. Old inefficient equipment was replaced with new modular equipment better matched to building needs. For the FY 2013 summer cooling season energy consumption by the chiller plant is 35% lower than previous years. This project was partially funded with ARRA grant funds.

Centric Project, a web based project management program is used on all capital projects, reducing the demand for paper and traditional mailing of project related communications; weekly teleconferences are used to coordinate discussion, in lieu of travel, to address items that come up between the standard monthly onsite meetings

ENERGY MANAGEMENT

ISU has metered buildings for 100% of electricity, 90% of steam and chilled water and 50% of potable water. ISU bills customers monthly for actual energy consumption. Included in this system is the opportunity for units that reduce their energy consumption and save money to retain those savings and apply them toward supporting their specific operations and initiatives.

Through a collaborative project between the Council on Sustainability, ISU Dining, and Vending Services partnered to install 168 vending machine misers throughout various campus locations – resulting in an estimated annual savings of \$14,000.

FP&M has developed a multi-year program to retrofit older T12 fluorescent lamps with new efficient T8 lamps in campus buildings. The new T8 lamps will use one third the energy of the old lamps. They are also doing pilots of new LED light fixtures at several locations.

In the fall of 2012, FP&M replaced all central campus streetlights with new LED light fixtures, with a projected energy savings of 100,000 kwh or \$10,000 per year.

The Office of Sustainability is piloting a Laboratory “Plug Load” Energy Efficiency Audit Program.

SPACE MANAGEMENT

Under the ISU budget model, units “rent” the square footage they occupy, encouraging ownership and conservation of space.

WASTE MANAGEMENT

- ISU Dining has implemented a number of initiatives focused on the mitigation of waste, including:
 - Implementation of a trayless dining program for one of three residential dining facilities as of Fall 2009. In comparison to a trayed residential dining program, serving a comparable number of daily meals, food waste was 50% less for the trayless program (reduced water usage as well as reduction in cleaning supplies also impacts waste reduction). As a result, and by student request, all residential dining facilities were trayless beginning Fall 2010.

- Composting of all food waste produced by the residential dining facilities is currently sent to the University Compost Facility (~500 tons/year), with the resulting compost used for campus projects.
- The College of Liberal Arts and Sciences Green Team completed a behavioral research project targeting all campus buildings housing LAS faculty and staff. The project included a series of information strategies to inform building occupants about building energy consumption (signage, email updates, and building competitions) and resulted in an overall energy consumption reduction of 20%.
- FP&M originally installed 12 solar trash compactors on central campus to replace conventional trash cans. The compactors eliminated 4 out of 5 of the trash pick-ups required by conventional trash cans. Reduction in use of vehicles, as well as staff time, has been so impressive, the University has expanded this program to include 45 solar trash compactors and 4 solar powered recycling containers.
- FP&M is actively expanding efforts to recycle construction waste from major capital projects and for smaller remodeling projects. With a goal to recycle 50% of the construction waste, ISU is meeting or exceeding that goal on most projects.
- The campus power plant has converted the existing stoker boilers from coal to natural gas. This conversion has **reduced the amount of ash produced at the plant by 6,000 tons**. In 2012, the university negotiated a long term agreement with Metro Waste Authority in Des Moines to take all the boiler ash. Metro Waste is using approximately 50% of the ash in a liquid waste solidification process, while the remainder of the ash is placed directly in their landfill.
- FP&M is coordinating recycling of white paper, cardboard and newspaper in many campus buildings. They are also working with building occupants to pilot single stream recycling programs.

University of Northern Iowa

Facilities Services at UNI underwent a major reorganization in 2009-2010. Efficiencies were implemented and personnel were reduced in the following units: Facilities Planning, Grounds, Physical Plant Maintenance and Operations, Mail Center, and Utilities and Power Plant Operations. The Facilities Coordination Center was combined with Operations and Maintenance, and the Mail Center, Warehousing and Campus Supply were combined. Custodial Services staffing was reduced and custodial shifts were reorganized so that buildings could be shut down earlier in the evening in order to conserve energy during night hours. Total Facilities Service position savings was over **\$1.1 million** dollars.

UNI Facilities Services has implemented FAMIS, a computerized maintenance management system which provides efficiencies and personnel savings. Previously four people were needed to maintain and process job cost data needed in three separate job cost systems and the MP2 work order system. FAMIS will free up at least two people once fully operational. The system will streamline the job cost accounting system, reduce the number of multiple entries currently required in the existing system and provide more accurate and timely job cost information. Efficiencies will be experienced in inventory savings; real time work orders, which have purchase activity connected and are viewable in one place; and

equipment records that will be readily available to management in order to make decisions on replacement and repairs. In the preparation of semi-annual reports, and project final reports, one person will be able to produce the report from the FAMIS system, compared to the current system where three people work in three systems in order to produce all the information that is needed.

EFFICIENT BUILDINGS

The UNI Multimodal Transportation Center opened to students, visitors, faculty and staff in November 2009. The center is believed to be the first net zero public facility in the State of Iowa. Geo-thermal heat pumps are used for heating and cooling and photovoltaic panels are located at the top of the facility which provides electrical energy. The panels are connected to the University's electrical infrastructure. Energy captured from the panels is metered and if it not needed for facility operation is sent elsewhere on campus. In the evening the electrical distribution system supplies needed electrical energy to the Center, which again is monitored. The facility is providing more energy than it is using.

Since 2008, The University has established a goal for all new and renovated facilities to attain a LEED Silver certification rating.

UNI LEED BUILDINGS AT A GLANCE

Projects Completed	LEED Level	Status
The Sabin Hall Renovation (2010)	Gold	Reoccupied in January 2010
Projects in Process	LEED Goal	Status
Phase I/Residence Hall Apartments	Silver	Occupied August 2012
Phase II/Residence Hall Apartments	Silver	Occupied August 2012
Bartlett Hall Renovation/ Baker Hall Demolition	Silver	Construction

The Baker Hall Capital Project, was originally projected as the renovation of Baker Hall. The University changed the project to the Bartlett Hall renovation/ Baker Hall demolition project. The result will be the removal of over 92,000 square feet of University building inventory which will reduce the university deferred maintenance and fire safety needs and save both energy and operational costs. The project is scheduled to be complete in December 2013.

In terms of energy savings, the Sabin Hall renovation project:

- Is anticipated to use 40% less water than code level (Energy Policy Act 1992)
- HVAC is anticipated to consume 15% less than code level (ASHRAE 90.1, 2004)
- Lighting power density is reduced to 40% below code (ASHRAE 90.1, 2004)

For the Residence Hall Apartment Housing Projects sustainable measures such as energy modeling were incorporated in the design process to help analyze and optimize the building's energy performance. Major sustainability features of the Apartment Housing project include:

- 20%+ reduction in water usage by selecting low-flow plumbing fixtures and plant selection which does not require irrigation.

- 20%+ improvement in energy performance as compared to baseline ASHRAE 90.1/2007 minimum standard. These savings will be achieved thru:
 - Energy-efficient ground-source heating and cooling system
 - Energy recovery units to use exhaust air energy to precondition fresh air
 - Exterior solar shades over larger windows on south façade
 - Orientation of building to avoid most windows on east and west elevations
 - Roof-mounted solar collectors for domestic hot water
 - Energy-efficient exterior walls, roof and windows
- 75%+ reduction of construction waste through recycling or salvaging for reuse.
- 20%+ use of recycled content in building materials.
- 20%+ use of regional materials.
- Significant improvement of indoor air quality through the use of increased ventilation and selection of low emitting paints, adhesives, sealants, and flooring systems.
- Providing individual control of lighting and thermal systems.
- Management of the quality and quantity of on-site water runoff. The project site is in a targeted watershed management area. Bio-swales, and green roofs have been incorporated

The UNI grounds department has converted approximately 80 acres of turf to naturalized areas across campus. The previous 21 weekly mowings for the 80 acres has been replaced with 3 prairie management related activities. This has resulted in an estimated reduction of 2-3 FTE staff, reduced maintenance and replacement of equipment, less use of fuel, and reduced emissions.

The University has initiated a storm water study which will establish a baseline storm water runoff model. The study will provide the basis for targeted spending to support compliance with the University's NPDES permit. In concert, the grounds department has established a zone map with criteria for application of fertilizers and or herbicides for each zone in an effort to reduce costs and the impact on Dry Run Creek.

ENERGY MANAGEMENT

In many areas of Rod Library, the amount of illumination was about twice as much as needed for the space, therefore in FY2010 many light fixtures were disconnected in the building. On the first floor, 269 fixtures were turned off; on the second floor, 237 fixtures; on the third floor, 115 fixtures; and on the fourth floor, 915 fixtures. Disconnecting these fixtures, as well as the addition of daylighting controls and occupancy sensors is giving an **estimated annual savings of almost \$40,000.**

In FY2011, several energy saving projects were completed. In the older gymnasiums at the Wellness Recreation Center, 112 high bay light fixtures at 500W each were replaced with 80 fluorescent 360W light fixtures. Zoned occupancy sensors were added for each individual basketball court to maximize savings. The estimated annual savings for this project is \$12,300.

Also in the Wellness Recreation Center, two chillers were interconnected that supply cooling for the building. The estimated annual savings for this project is \$17,500.

The UNI-Dome received a lighting upgrade in FY2011. This project included replacing the light fixtures, as well as the control system. UNI replaced 392 (1000 watt) light fixtures with 128 (1500 watt) light fixtures. This reduced the connected power from 392,000 watts to 192,000 watts. With the new control system, users can select lighting levels to match activity requirements. The estimated annual savings is \$24,000.

One third of the Wellness Recreation Center chiller project and the UNI-Dome lighting project were funded with an Office of Energy Independence grant.

The Biology Research Complex received a lighting upgrade in FY2011. This project replaced all the light fixtures in the building, reducing the quantity of light fixtures from 320 fixtures to 165 fixtures. In addition to the new fixtures, occupancy sensors were added to all offices, classrooms, labs, conference rooms and restrooms. The connected power was reduced by 75%. This project saved considerable energy and the estimated annual savings is \$7,600.

In FY2011, the University standardized on LED pedestrian pole light fixtures for all future installations and replacements. The pedestrian pole lights are being replaced from high pressure sodium (100 watts) to LED (40 watts) light fixtures. The life span of the LED fixture is expected to be 25 years. The input wattage for each fixture is reduced by 70% with this replacement. This standardization has been expanded to parking lot lights.

The Multimodal Transportation Center opened in FY2011. This facility is one of the first net-zero buildings in the State of Iowa. The center is powered by 960 photovoltaic (PV) panels and the lobby is tempered with heat pumps. Each PV panel has an output of 215 watts, which is a total of 206,400 watts for the system. This amount of electricity is equivalent to powering approximately 75-100 average-sized homes. The surplus power created by these panels is fed back into UNI's electrical grid for use by other campus buildings.

In FY2012, UNI completed three additional energy projects that received one third of their funding from an Office of Energy Independence grant. Curris Business Building received a lighting upgrade. This project replaced all the light fixtures in the building, excluding the corridors as these were already compact fluorescent lamps. In addition to the new fixtures, occupancy sensors were added to all the offices, classrooms, conference rooms and restrooms. UNI replaced 1060 fixtures throughout the building and the connected power was reduced by 50%. The estimated annual savings is \$10,650.

The Industrial Technology Center also received a lighting upgrade. This project replaced all the light fixtures in the building, approximately 500 fixtures. In addition to the new fixtures, occupancy sensors were added to all offices, classrooms, shop areas, conference rooms and restrooms. The connected power was reduced by 65% and the estimated annual savings due to this project is \$15,000.

A project in the Maucker Union improved both lighting and HVAC controls. For the lighting portion of this project, all the inefficient lighting in the food service and dining areas were replaced. The HVAC improvement upgraded the air handling unit system that serves the dining and lower level of the building. This upgrade included replacing pneumatic controls to

direct digital controls and installing variable frequency drives on the air handling unit itself. The **estimated annual savings due to this project is \$50,000.**

A major renovation of Sabin Hall was completed in FY2012 and the building received a LEED gold rating. This includes a mechanical system that is not only the most efficient and cost effective in terms of life cycle cost, but is laid out with classrooms and offices separate due to differences in hours of operation. The HVAC system is a variable air volume system with a dedicated outside air unit. Low wattage lighting was installed and occupancy sensors were added in all offices, seminar rooms, restrooms and the lecture hall. With the natural light incorporated throughout, this enables the use of daylight harvesting which turns off unneeded artificial light.

The Maucker Union ballrooms were renovated in FY2012. This project was a complete renovation for the ballrooms, which included the lighting and mechanical systems. For the mechanical systems, UNI replaced the original three air handling systems with three new efficient ones with variable frequency drives. For the lighting portion of this project, all the inefficient lighting was replaced. These new fixtures reduced the wattage necessary and improved the illumination of the space. The estimated annual savings due to the lighting alone is \$14,000.

In FY2013 the Campanile spot lights were replaced with LED. This reduced the wattage from 7,440 watts to 640 watts with an estimated annual savings of \$1,600.

Effective July 14, 2012, production of most T12 fluorescent lamps had been phased out, as mandated by the 2009 Department of Energy General Service Lamp legislation. UNI had several buildings that use the T12 fluorescent lamps including Kamerick Art Building, Latham Hall, McCollum Science Hall, Communication Arts Center and Rod Library. In order to fund the light fixture retrofits in these buildings, the University used the Iowa Energy Bank's low interest loan program as a funding source. UNI borrowed \$1,217,000 to fund these lighting retrofits as well as new DDC controls and lecture hall CO2 control for the Curris Business Building. All of these projects were completed in FY2013 and FY2014 with an aggregate **estimated annual saving of \$105,000.**

UNI has completed a Phase II wind turbine study for installation of up to 4 MW of wind turbines on campus. The University is studying financing options for the project. In addition, the University just completed the installation of a 10KW wind turbine on south campus which feeds energy to the Industrial Technology Center, and the Industrial Technology Center has installed a 2KW photovoltaic panel which supplies energy to the building.

UNI has installed electrical meters for all major buildings. Energy Management monitors details of building electrical usage and works with users to reduce energy use. The University has also installed networked meters at the power plant on the turbine, incoming CFU feed, station power and the five feeders which supply campus. The metering system is able to detect and capture information on problems in the system in order to improve reliability.

Condensate meters have been installed at all major building to study steam use. The meters are remotely read with the building automation system. The building automation system software maintains both current and historical steam usage data for analysis.

Chilled water wells: UNI has installed meters at all cooling wells on campus. All meters are remotely read through the building automation system.

The University has established and published a temperature policy for University buildings.

The University continues to work with faculty, staff and students to reduce building operational schedules on campus during the winter break in order to save energy. This practice has been followed for a number of years with growing participation.

SPACE MANAGEMENT

Energy Management is working with campus users to reduce building operating hours. The central building automation system, which has been in use for over 20 years, is used to schedule building system operations, increasing the unoccupied building cycle times.

UNI's space utilization policy has established standards for office size thus controlling the amount of space allocated for these functions. The effect is a reduction in square feet of space being built, renovated and operated.

WASTE MANAGEMENT

UNI installed 12 dual and 6 single Solar trash compactors on campus during the summer of 2010, thus eliminating trash collection for those central campus areas by 75 to 80%.

UNI has implemented an imaging system which has captured over ½ million pages and allowed the paper to be recycled.

The University has standardized on system furniture which allows reuse throughout campus. The University also operates a bi-weekly sale for furniture and equipment no longer needed at the university, in order to maximize recycling.

For two years Panther Pick-Up has been in operation. This joint initiative involves the residence halls, the City of Cedar Falls, Goodwill, Salvation Army and St Vincent de Paul, the College Hill Partnership and several University departments—The Iowa Waste Reduction Center, The Recycling Reuse Technology Transfer Center, The Wellness Center, the Physical Plant, and Marketing & Public Relations. in collecting, used clothing, furniture, metals and other items as students move out of their residence halls for reuse instead of going to the landfill.

UNI dining has implemented trayless dining in the dining centers on campus. In addition the dining centers recycle cooking oil, tin, glass, paper and cardboard. The residence system has also provided recycling containers for all resident rooms to encourage and increase recycling.

180 tons of mixed office paper and cardboard were recycled directly by the University with City Carton.

215 tons of materials were recycled in partnership with the City of Cedar Falls through the recycling substation site on campus. All used batteries, lamps/light bulbs, toner cartridges and paint thinner were recycled but the University does not maintain counts of these items.

Used computers are recycled after hard drives have been scrubbed and cleansed. They are offered first for sale through the Campus store then with the CF Transfer station if items don't sell within a month.

Iowa School for the Deaf

Iowa State University provides design, bidding and construction services for all remodeling and new construction projects. ISD also piggybacks on environmental contracts for assessment and remediation services through ISU.

The Iowa School for the Deaf continues to strive to operate as efficiently as possible in the energy conservation arena, while providing an indoor environment that is conducive to learning. During the first ten months of 2010, the school net consumption of natural gas appears to be on track and is somewhat less than that used in 2009. The School's consumption of electricity was flat in comparison to that of FY 2009, even though more technology was being utilized in the classrooms and dormitories. The School attributes this reduction to the following ongoing initiatives:

- Continued improved operations and maintenance practices by all facilities personnel and other school staff.
- A heightened level of awareness by all ISD students and staff on the importance of being good stewards of natural resources.
- Ongoing replacement of T-12 lighting systems with T-8 and T-5 lighting systems and electronic ballasts.
- The phasing out of incandescent light bulbs with compact fluorescents.
- Installation of occupancy sensors in restrooms and storage rooms.
- Additional insulation for roof replacement projects and the use of roofing systems with a higher SRI Rating (Girls' Dormitory).
- The School is currently in the design phase of replacing Boiler #3 in the Power Plant with a steam generator, which will provide for a more efficient system during the spring and fall low load conditions. This project will be funded with Repair and Maintenance monies, as well as a grant from the Iowa Office of Energy Independence.
- The School is also in the design phase of replacing the 35 year old HVAC system in the elementary school building with a new energy efficient system that will allow for improved operation and comply with new ASHRAE requirements. This project will also be funded with Repair and Maintenance monies, as well as grant monies from the Iowa Office of Energy Independence.

Iowa Braille and Sight Saving School

Over the past three years the Cottage, Old Hospital, Old Main, Palmer Hall and Rice Hall have undergone extensive renovations due to AmeriCorps NCCC's presences on the Iowa Braille School's campus. These renovations have included electrical (energy efficient lighting, light sensors), plumbing (water efficient toilets, water sensors) and HVAC (energy efficient air conditioners, new heating convectors) upgrades. The Iowa Braille School also completed in FY08 the geothermal system installation in Old Main. Efficiencies were gained.

5. ACADEMIC AND ADMINISTRATIVE

University of Iowa

Since FY 2003, instructional activity, as measured by student credit hours, increased by 73,312 or the equivalent of 2,400 student full-time equivalents. Instructional productivity, as measured by student credit hours per faculty and teaching assistant FTE, increased 9%, from 328 to 356.

Since FY 2003, clinical service activity, as measured by patient visits to hospital and dental clinics, increased by 20%, from 937,733 to 1,122,285.

Since FY 2003, sponsored research activity, as measured by grant applications submitted and awards received, increased by 27% and 15% respectively, from 2,911 to 3,696 (applications) and from 1,867 to 2,141 (awards).

Since FY 2003, the percent of faculty compensation paid from the University's General Fund, the fund supported by state operating appropriations, decreased from 53% to 42%.

Since FY 2003, the percent of tenured/track faculty FTE as a percent of total faculty FTE fell from 68% to 56%. The University managed the substantial activity increases noted above by strategically hiring faculty who specialize in teaching, research, or service. Increasing specialization has enabled the University to grow in each phase of its mission without a concomitant increase in tenured/track faculty.

Student credit hour enrollments in fall courses managed by the University's Division of Continuing Education increased by 400% over the past decade (from 16,100 to 64,200 student credit hours)

Based on the recommendations of the Graduate Education Task Force, along with the results of the NRC Assessment of Doctoral Programs, the Graduate College has spearheaded the elimination, restructuring and implementation of almost 50 graduate degree, sub-track and certificate programs on campus. Continued program adjustments are underway.

Many of the colleges have undertaken administrative reorganizations that will lead to longer-term efficiencies that will reduce the costs of administration. Examples of these efforts include:

- The College of Pharmacy has combined Pharmaceutical Services with the Center for Advanced Drug Discovery to create University of Iowa Pharmaceuticals.
- The College of Dentistry and University Hospitals and Clinics agreed to move the administration of UIHC's hospital dentistry program to the college. The move has enabled the University to **save approximately \$300,000**.
- The College of Education has created administrative efficiencies that have enabled it to eliminate 4 merit staff and 4 professional staff positions. These efforts include online applications for the management of: scholarships; student enrollment; student field experiences, and faculty activity.
- The College of Liberal Arts and Sciences has created seven shared service centers providing administrative services which serve multiple departments while maintaining the

individual department's identity. These centralized "centers" have improved access to services for faculty and students and facilitated the sharing of best practices as new processes and procedures are implemented. This model will continue to be developed as the opportunities arise. Estimated savings are **\$300,000**.

Student Academic Support Services has pushed to improve administrative efficiencies. Efforts include:

- The Registrar's Office has converted the course catalogue to online; and eliminated paper printing of student records.
- As part of the Board of Regents initiative to improve access to information for transfer students from Iowa community colleges, SUI's Admissions Office created a new online resource called I-Chart which allows prospective students to determine how their community college courses will transfer to SUI and how they will fit into specific SUI degree programs. This new self-help tool has greatly enhanced services to transfer students resulting in these students being better prepared for their transition to the University of Iowa.
- Admissions is combining the printed viewbook and printed travel brochure into one comprehensive marketing piece resulting in production efficiencies as well as cost savings of about \$16,000.
- Admissions changed the process for issuing immigration documents (I-20s) to admitted international students. These are now only issued after students accept admission rather than issuing to all admitted international students at the time of admission. This is projected to save \$30,000 in Federal Express charges as well as 321 hours in staff time.
- Academic Advising implemented an online appointment system (**\$70,000 savings**).
- The University created an online Financial Literacy course to provide financial education efficiently.

The reorganization of Support Service Programs and Opportunity Iowa into the Center for Diversity & Enrichment was recommended by the Diversity Action Committee Report to align services and maximize effectiveness for traditionally underserved populations.

The University closed the Chicago Center resulting in a savings of **\$150,000**.

A centralized tutoring service was created to meet student demand and to reduce inefficiencies.

Student orientation processes are being reviewed with an eye towards automation and use of technology to reduce costs; the registration processes were changed this year to reduce printing costs.

The implementation of the new student information system MAUI was completed in winter 2013. The new system provides contemporary web interface and integrates business processes and data from several legacy systems (Admissions, Student Records, Financial Aid, and Billing). The new system provides new functionality for student relationship management, events management, and orientation. The new system includes automated business processes, workflow, rules engine, communications engine, and enhanced

reporting. The implementation of a new student system will lead to a number of administrative improvements including:

- Ability to process admissions application decisions in 48 hours or less.
- Enhanced student registration to extend self-service add/drop capability through the first week of the semester allowing over 5300 students to add over 8000 sections and drop over 8800 sections.
- Automated the Admissions prospect and applicant processing, Admission's decision, Financial Aid departmental scholarships, and financial aid awarding; also, course offering and approval process, residency determination, duplicate checking, record merging, departmental billing processes, advisor assignment, grade processing, graduation application, degree clearance and course wait listing.
- The University Billing system that provides electronic presentment and payment for academic charges was implemented, saving printing, postage and processing charges. On a monthly basis SUI typically generates over 50,000 "U-Bills", about 70% of which are delivered electronically. Over 80% of these are paid electronically.
- Implemented a customer relationship and correspondence management system to monitor and track interactions with prospective and current students. Since the student relationship management system went live, there have been 172 letter and 742 email campaigns that generated 278,000 letters and 3.4M emails respectively.
- Provide real-time access to university billing, financial aid awards, degree audits, community college transfer course equivalency and admissions application status.

Iowa State University

ISU Admissions Office implemented the Admissions Partnership Program with all 15 Iowa community Colleges. This program has resulted in closer ties with all of the community colleges as well as efficiencies and improvements in the coordination and delivery of services to students, such as advising, housing, etc.

As part of the Board of Regents initiative to improve access to information for transfer students from Iowa Community Colleges, ISU's Admissions Office created a new online resource called TRANSIT which allows prospective students to determine how their courses will transfer to ISU and how they will fit into specific ISU degree programs. This new self-help tool has eliminated the need for Admissions to do preliminary transfer credit evaluations for students who are considering Iowa State.

ISU's Admissions Office recently implemented a new automated process for admitting US freshman applicants that dramatically increases efficiency in processing and convenience for applicants. This process reduces the time required for notification of admission status to just two days, and eliminates the need for thousands of high school transcripts to be received, scanned, data entered and evaluated. The new process allows Admissions to reallocate resources (potentially up to **\$50,000**) to the processing of transfer, graduate, and international applications.

Participation in a new electronic high school transcript initiative will allow all Iowa high schools to submit their transcripts to Iowa State University electronically and in a single standardized format and also allow ISU Admissions to automatically upload pertinent academic information into the ISU student information system. In addition, images of the transcripts will be automatically imported into the Admissions imaging system.

The Office of Student Financial Aid now provides videos through the web on financial aid and financial literacy topics

Iowa State University went through a significant restructuring of Extension for FY 2010 which resulted in savings of **\$4.5 million**.

ISU is a founding institutional member in Great Plains IDEA, a collaborative effort involving the delivery of courses by a consortium of Midwestern universities (current efforts involve human sciences, agriculture and engineers)

ISU academic colleges are combining departments and increasing teaching loads.

An internally developed automated tutoring system allows for electronic entry of tutoring requests by both tutees and tutors, streamlines the process of assigning and paying tutors, reduces clerical efforts will save approximately **\$54,000** in salaries and fringe benefits. Students are now assigned a tutor within two days of requesting one, rather than waiting two weeks. In collaboration with ISU Accounts Receivable, this automatically bridges charges to students and/or sponsors for payment.

A newly created system to electronically notify principal investigators of upcoming deadlines and responsibilities annually saves 150 staff hours at an estimated savings of \$4,000.

Student financial aid emails sends reminders to parents and students of processes, deadlines, and missing documents related to financial aid. This greatly increases the percent of student submitting financial aid in a timely fashion, resulting in more aid for those students.

The Division of Academic Affairs works on a continuous basis to improve upon the affordability of the education it provides. Efficiency improvement is a key indicator of progress for the division, aligned with both the university's and Board's strategic plans, as well as stakeholder expectations. Some efficiency improvements are easily monetized, like cost savings on utilities. Other improvements result in reducing unnecessary steps and confusion, thus preserving the valuable time of faculty and staff for more important work.

EXTENSION AND OUTREACH

- A greater proportion of E&O's central administrative funds are now directed to its service units – closer to the customer – than in years past. After absorbing federal cuts, the E&O central administration budget was cut by nearly \$1 million this year, and the funds to units and colleges were increased. In FY 2014, all program units and county services are receiving increases totaling \$2.07 million, in turn generating more value to the customer.
- A new county office accounting system, and the elimination of T1 lines, resulted in an annual **savings of \$40,000**.

- A new university wide registration system in Conference Planning and Management, which features secure credit card access, improves efficiency and is an enabler for future growth, which had been limited by outdated systems.

COLLEGE OF HUMAN SCIENCES

- The Nutrition and Wellness Research Center was reorganized in May 2013, generating an annual **savings of \$250,000** in salaries and benefits, and with the potential for future savings in rent and utilities.
- Reorganizing an associate dean position into a new director of operations position resulted in an annual savings of \$80,000.
- The Live Green Revolving Loan Fund supports approximately 4% of the School of Education's HVAC renovations and improvements. When the renovations are completed, the capital investment of \$100,000 will be recovered within three years. Thereafter, the college will be able to reinvest the annual energy savings into its academic programs.

COLLEGE OF ENGINEERING

- The college's SPEED summer bridge program was merged with the university's APEX program to achieve a new economy of scale. In exchange for investing \$50,000 in the APEX program, the college **realized savings of approximately \$100,000** in annual programmatic costs as well as a reduction of 1.5 FTE.

COLLEGE OF AGRICULTURE AND LIFE SCIENCES

- The college discontinued the master of agriculture with major in professional agriculture, and reallocated faculty time to focus on delivering high-quality online master's degree programming in agricultural education.
- A 5-10 percent target for reducing energy consumption has been established in CALS. Specific initiatives include replacing windows in Curtiss Hall and East Hall, and the installation of a geothermal heating and cooling system in the Hansen Agriculture Student Learning Center.
- CALS withdrew as host of the U.S. Pork Center of Excellence, saving \$100,000 per year.
- The college has improved and streamlined services in order to support a 25 percent increase in study abroad participation with the same number of staff.

COLLEGE OF LIBERAL ARTS AND SCIENCES

- A decision to function with three associate deans, instead of the previous four, has **reduced the college's administrative costs by approximately \$300,000 annually**.
- A strategic continuous improvement process of basic math courses has increased the success rates of students in certain gateway courses by as much as 30 percent, reducing the need for students to retake the class, and therefore improving the efficiency of educational delivery.

GRADUATE COLLEGE

- The Graduate College partnered with The Boeing Company in a Lean project to streamline the process by which graduate students develop their programs of study. This work will **save \$325,000 per year** when fully implemented by reducing the total cycle time from 252 days to 26 days, reducing touch time from 11 hours to two hours, and reducing the number of process steps from 82 to 18.

VICE PRESIDENT FOR RESEARCH

- A high throughput Web-based reporting system more efficiently manages regulatory workload, minimizing faculty time while still meeting NIH conflict of interest reporting requirements. These efforts have helped faculty. For example, while the number of human subjects research projects processed through the Institutional Review Board has increased, the mean review time has dropped from 37 days to 17 days – a 54% improvement.
- Several research centers have been closed following approval by the Board of Regents. These include the Airworthiness Assurance Center of Excellence and the Center for Research on Botanical Dietary Supplements, as well as two other legacy centers—within—a-center. These efforts reduce complexity by decreasing the number of accounts that need to be tracked and administered.
- A new intellectual property model – in which companies pay a nominal fee up front (\$15,000) and ISU receives backend royalties for sales over \$20 million – simplifies contract negotiation with companies and makes it easier for faculty to work on sponsored projects.
- The Office of Biotechnology implemented an electronic billing and ordering system for core equipment facilities, saving 0.25 FTE annually.

OFFICE OF THE SENIOR VICE PRESIDENT AND PROVOST

- Model documents have been developed and placed on the office's website for staff in colleges, departments, and units. These documents serve as templates and starting points so that the paperwork for common actions and requests need not be re-invented, thus reducing frustration and speeding-up decisions.
- CyBox is being used for the first time deployment of electronic documents in the promotion and tenure process, eliminating the need for considerable staff time across campus to be spent in preparing, and transporting, boxes and boxes of paper files.
- A uniform calendar of deadlines has been established, such that it does not change from year to year, thus simplifying knowledge about important deadlines for departments and colleges.
- Collaboration with University Human Resources and the Office of University Counsel led to multiple new processes and improvements that are expected to rollout in FY14.

UNIVERSITY LIBRARY

- The digital repository's level of adoption continues to increase, facilitating electronic access to publications and saving physical space in library facilities.
- A third floor renovation project in the Parks Library installed new energy-efficient light fixtures over study areas and stacks. The capital investment will be recovered within three years, and savings thereafter will be reinvested in library programs.
- Existing furniture in the third floor study area was refurbished, rather than replaced with new furniture.

University of Northern Iowa

UNI consolidated two colleges and reduced the number of university divisions reporting to the President from four to three. An academic program review was conducted in 2007-8 at UNI and a number of programs were recommended for elimination.

UNI's Student Information System project will enable the University to deliver improved services for students and faculty, including extensive self-service capability for many tasks that require staff intervention today. It will provide improved user access to information and reporting tools to improve administrators' ability to see and address tactical and strategic challenges and opportunities.

Participation in a new electronic high school transcript initiative will allow all Iowa high schools to submit their transcripts to the University electronically and in a single standardized format and also allow UNI Admissions to automatically upload pertinent academic information into the UNI student information system

UNI closed and restructured academic programs which had small number of majors and graduates. The Price Laboratory School was also shuttered.

Iowa Braille and Sight Saving School

One of the goals of the Statewide System for Vision Services partnership agreement with the Iowa Department for the Blind, Department of Education and Area Education Agencies is to reduce duplication of services between providers. Duplication has been reduced in the areas of access to library collections and services and access to and production of instructional materials for Braille, audio and large print. Additional efficiency has been through the coordination of transition services. Due to the efficiencies with this partnership agreement a consultant position in the area of transition has gone unfilled to assist in managing the reduction in the State appropriation. IBSSS shared services with the Iowa Department for the Blind. The savings for salary, benefits and travel for this position would be approximately **\$78,000** had it been filled. With the change in model from a residential-based service to a statewide system of services the administrative structure of the Statewide System for Vision Services has reduced by .6 FTE administrative personnel serving within the system. The salary and benefit saving is approximately **\$42,000** and the savings have been used to manage the reduction in State appropriations.

Selected Findings for the University of Iowa Hospitals and Clinics (UIHC)

The University of Iowa Hospitals and Clinics employed an expense moderation strategy:

- Rigorous expense management, limiting budget additions and excess payroll growth – with budget authority to flex based on activity
- Recast the FY 09 operating budget to achieve targeted operating margin
- Manage length of stay downward, especially in Internal Medicine
- Fully deploy physical capacity and utilize efficiently (beds, ORs, high tech imaging)
- Improve access and throughput (Bed Management Initiative)
- Continued focus on supply chain opportunities - benchmarks
- Link investments to performance – targeted outcomes agreed to up front with ongoing measurement
- Provide support to enhance execution of targeted initiatives (Program Management Office)
- Track performance – shared throughout the enterprise (balanced scorecard)
- Achieve targeted program growth

To enhance Revenue, UIHC implemented:

- Access and throughput
 - New Transfer Center created to provide “one-call” convenience for referring physicians, consistent with medical necessity & financial screening criteria
 - Centralized bed management
- Offsite strategies
 - Clinics moved offsite to improve patient convenience and access
 - Enlarging the Primary Care “footprint” in surrounding communities
- Areas of targeted growth
 - Developed integrated strategic plan, aligning goals of CCOM and UIHC.
 - Identified specific programs for investment in growth

To manage expenses, UIHC:

- Reduced labor expense
 - Over 40 senior leaders took a 5% pay reduction through FY10
 - Employees offered opportunity to take voluntary temporary reduction in pay (estimated at 2% savings through FY10)
 - Employees also had an opportunity for vacation “give-back”
 - Searches for COO of UIHC and Executive Director of the UI Children’s Hospital delayed
 - Open positions filled primarily with internal hires
 - Skill mix adjustments

- Staffing levels linked to patient safety requirements, clinical volumes and service levels
- Found supply chain savings
 - Supply chain projects estimated to save over \$4 million annually
 - Standardization of supplies/equipment
 - Best pricing
 - Continuous attention to utilization management
- Re-engineered the way care and services are provided applying “Lean” and Six Sigma methodologies:
 - Clinical quality and patient safety
 - Human resource services
 - Outpatient clinic service redesign
 - Inpatient bed management
 - Observation patient stays
 - Length of stay management
 - Perioperative services
 - Function consolidation across CCOM and UIHC
 - Inventory management and materials distribution
- Worked with management team to activate changes
 - Senior Management Team (SMT) for UI Hospitals and Clinics worked through a method to allocate operating expense targets for each area of the hospital and clinics
 - These targets were used to develop a detailed operating budget for each area
 - Line managers worked to operationalize the expense budget
 - SMT collectively met in a series of “budget hearings” to resolve issues and review operational plans for each cost center/department
 - Line managers and SMT held accountable for results

APPENDIX 1

PURCHASING

Purchasing Savings from Collaborative Efforts FY 2009-2013

- Dell – desktop and laptop computers –\$18,225,000
- Whelan Security – event security –\$116,350
- Office Max – office supplies – savings of \$1,500,000
- US Bank – extension of Procurement Card to Department of Administrative Services and State agencies – Increased Rebate \$1.18M
- NuAire – biosafety cabinets – savings of \$47,600
- AmSan – green cleaning program - \$300,000
- Fisher Scientific – scientific supplies and equipment - \$1,149,234
- Anixter and Graybar - telecommunication supplies - \$218,663
- Plumbing Supplies - \$68,000
- Group Long-Term Care Insurance – 1428 employees enrolled
- Fleet Overflow Vehicle Lease - \$40,000
- Fleet Cards – Rates unchanged
- Copier equipment - \$937,000
- Dry Sorbent Injection Monitoring (hazardous gases) - \$93,000
- Waste Cooling Oil Disposal - \$7,700
- WW Grainger – maintenance, repair and operations supplies – savings of \$150,000
- Clean Harbors Environmental Services – hazardous waste disposal – savings of \$175,000
- VMWare – software licensing – savings of \$320,000
- WM LampTracker Inc. – florescent lamp recycling – savings of \$8,000
- A-Tec – electronic recycling – savings of \$21,380
- Cell Phone services – joint RFP with DAS and DOT to be awarded in the next 30-45 days. Actual savings have yet to be determined but it appears plan savings could be in the 11-22% range, along with additional build out and coverage benefits
- Green Cleaning Supplies - SUI and UNI collaborate on a joint contract for selected green cleaning supplies. In FY 2013 this saved \$107,800. Since the onset of the contract in 2010, the cost-avoidance to SUI has been more than \$300,000.

Purchasing Efficiencies

University of Iowa

- Implemented eBuy: FY 2009 – FY 2013 Savings /Revenue

eBuy is a hosted catalog system with 20 Master agreements and vendors are paid with a procurement card.

- Renegotiated/Redirected Spend Contract Savings - \$1.2 M
- Collected revenue from Vendor Technology Fee - \$879,045
- Recouped contract savings from price monitoring - \$360,000
- Reassigned work for 1.75 FTE - \$400,000
- Increased Procurement Card Rebate - \$568,000
- Eliminated Scanning Services - \$200,000
- Reduced staff by 1 FTE - \$250,000

- Procurement Card/ Travel/ProTrav

- Negotiated Consortium Procurement Card Contract (October 2010 – October 2014)
 - Improved rebate revenue share \$1.18 by FY2014
 - Increased to 17 members for over \$149M in purchases
- Agreed with UNI to implementing SUI's ProTrav System in FY15. Allows improved controls for UNI as well as savings on system costs.
- Implemented new functionality – Upper level review of transactions, high risk transaction review and level III data display

- Purchase Order, Inventory, Contract Manager and Voucher System FY 2009-FY 2013 Savings:

- Switched vendors from check to ACH - \$45,000
- Eliminated paper vouchers and invoice copies - \$100,000
- Initiated electronic purchase orders - \$45,000
- Implemented email notification of purchase order issuance, invoice and receipt to departments.
- Issued over 2700 contracts electronically with digital signature.
- Created departmental score card for reviewing off contract purchase, vendor summary, purchasing trends and opportunities for savings.

- eBid – Electronic competitive bid system FY09-FY13 Savings

- Eliminated paper and mailing costs - \$50,000
- Issued 270 bids annually
- Created exclusive Electronic Bid Response
- Recognized process efficiency gains through electronic bid response review and award

- Created on line training for procurement cardholders, reconcilers and approvers.

- Vendor Trak – This system allows vendors to access purchase orders issued, invoices received and payments made. Functionality was added to allow vendors to upload invoices electronically for processing.
- Expansion of electronic Workflow applications to all aspects of SUI business operations

Iowa State University

Summary of process improvements and efficiencies in ISU purchasing:

- Designed and implemented a fully enabled web-based requisitioning workflow system.
- Increased utilization of “CyBuy”, a third-party hosted e-procurement solution from SciQuest that provides easy access to major university-wide and collaborative joint Regents contracts, increasing utilization of best contract pricing, and streamlining processes. “CyBuy” currently serves 3,000 campus users and in FY13 processed over \$19 million in expenditures without paper, using the P-card as a payment instrument. Administrative efficiencies realized since FY13 include reducing the number of purchase orders by 6% and the number of invoices processed. “CyBuy” enables users to efficiently place orders 24/7 from contracted vendors, and generates enough revenue to fully support the cost.
- Implemented a purchasing card program for delegated authority on campus with a fully functional p-card reconciliation system to download transactions nightly and ensure integrity and accountability in the program. Developed an automated audit process for p-card transactions to identify potential fraud committed on cards from outside the university.
- Converted contract & blanket order processing to web-based requisitioning system eliminating the triple handling of over 3,000 documents.
- Electronic notification to departments of the placement of orders
- Imaged purchase orders available campus viewing
- Automated computer faxing and emailing of purchase orders to vendors instead of printing and mailing a paper copy resulted in a 76% reduction in postage costs.
- System faxing and emailing of purchase orders to suppliers eliminating postage & printing costs
- Post all bid solicitations on website and notify vendors via email automatically based upon vendor profiles. Vendors download bid documents from website and submit responses electronically to the quote desk manager.
- Scan attachments to purchase orders and requisitions eliminates about 15,000 copies and manual process of mailing.
- Implemented an online vendor application form eliminating mailing to vendors.
- Modified the p-card reconciliation system to pull in Level III data (line item detail) from merchants which improves accuracy and reduces entry work for departments.
- Created an online p-card renewal training so cardholders are able to access training at their convenience and reduces training time associated with 2100 cardholders.

- Implemented an electronic insurance certificate management software which identifies certificates that have expired, sends notifications to contractors before they do work on campus, and reviews certificates for compliance.
- A university-wide procurement list serve was used to provide immediate information to the campus regarding procurement contracting initiatives, process or policy change, or scam alerts.
- The contract renewal process was re-engineered to accommodate multi-year agreements, eliminating the needs to annually process every contract and provides for better pricing if suppliers need a longer commitment to recover their investment.
- Conduct Vendor Orientations on campus for Targeted Small Businesses and Iowa businesses to assist them with doing business at Iowa State University.
- Implemented a formalized Contract Administration Plan program which improved overall contract performance, increased internal customer satisfaction, and created cost savings of \$843,000.
- Established a ghost card payment process for University Bookstore and Parks Library for their high volume vendors that eliminated over 3,800 vouchers and checks.

University of Northern Iowa

- UNI implemented ACH disbursements for payments issued to employees and students and a limited number of vendors during FY 2009. This has resulted in a savings of over \$76,000 (80,645 ACH disbursements @ \$.95/ck) in materials alone, plus staff time to process the checks and savings in postage costs.
- System faxing or emailing of purchase orders to suppliers eliminating postage & printing costs
- Post all bid solicitations on website and notify vendors via email. Vendors download bid documents from website and submit responses electronically to the appropriate purchasing agent.
- Implemented an online vendor application form eliminating mailing to vendors.
- A university-wide purchasing/payables list serve was created to provide timely updates to the university community regarding process or policy change, training opportunities or other relevant information.
- Additional savings were realized with the conversion of many direct payments to procurement card during the last five fiscal years, reducing staff efforts to process the invoices and issue payments and resulting in an increase in procurement card purchases by 121% and an increase in rebate of over 269%.
- New systems allowed UNI to process an increase in total spend of approximately 20% while reducing staff resources by 1.5 FTE, resulting in net savings of \$100,000 annually.
- UNI partnered with SUI on a prime food agreement that has saved each institution 2-6% from previous agreements. UNI improved pricing with Prime Food Vendor, Martin Brothers, amounting to a savings of \$35,000 - \$50,000 annually since FY 2010.

- The same vendor for a Housing Information System was selected by SUI and UNI, resulting in improved pricing for both institutions; UNI savings were \$20,000.
- In collaboration with the University of Iowa, UNI is implementing an online travel and procurement card tracking and reconciliation system to be rolled out in FY 2014. This system will eliminate the need for paper supporting documentation and automate the approval process.
- The centralized AR system facilitates more efficient and timely collection of outstanding receivables and minimizes the risk of overdue receivables going uncollected.
- In January 2011, UNI implemented optional electronic receipt of W-2s for employees with 12% currently electing, with a goal of 27% by January 2014. Electronic receipt reduces printing and US postage costs.
- Partnered with PeerTransfer to facilitate electronic funds transfer for International Students at no additional cost to the student or UNI, which facilitates more timely payment by International students.
- Created eLearning classes to serve campus users in the areas of procurement card, cash handling and credit card processing procedures. . This delivery method allows us to offer training to users at their desk, accommodates individuals with disabilities and is more efficient than offering class room training for all impacted employees.

Iowa School for the Deaf

The school renegotiated and restructured its cell phone usage plan to take advantage of an existing ISU contract that realized a 25% savings. The school also takes full advantage of the Federal E-Rate program to fully subsidize the cost of the cell phones, local and long distance land line service, and internet access.

APPENDIX 2

IT SERVICES AND OPERATIONS

University of Iowa

- *BOREAS-Net* – SUI and ISU, along with the University of Minnesota-Twin Cities, and the University of Wisconsin-Madison have developed a very high-speed regional optical network to support education and research. *BOREAS-Net* provides connections between the universities and national research networks as well as access to low-cost Internet bandwidth in Chicago. The Regent universities supply bandwidth to the state's ICN thereby allowing the ICN to reduce costs. Overall savings in excess of \$1,000,000.
- *Server Virtualization* – Virtualizing a traditional server can save hundreds to thousands of dollars in initial costs and several hundred dollars a year in operational costs. Virtualization can result in a 20-to-1 or higher reduction in the number of physical servers, which significantly decreases costs for maintenance, support, and utilities. Current annual savings for each of the virtual servers is estimated to be about \$1,000. The use of servers across the three campuses continues to grow and currently exceeds more than 1400. Annual savings \$1,400,000.
- *PC Bid* – Working with purchasing departments, this award to Dell resulted in desktop PC prices more than 50% below standard higher education discounted prices, and about 20% less than any other government or purchasing group pricing to which the universities have access. Savings resulting from this RFP as compared to higher education list price are estimated to be at least \$2,444,000.
- *Organization*: The University of Iowa consolidated separate academic and administrative departments into one new enterprise IT organization under a campus Chief Information Officer (CIO) in 1993. Since then, consolidations occur as opportunities arise. Estimated annual savings \$800,000.
- *E-mail*: Consolidated the enterprise e-mail systems on campus to one for academic use and one for hospital use, both standardizing on a consistent email platform, but allowing the regulatory and business requirements of each to be met efficiently. Estimated annual savings \$200,000.
- *Student Email and Calendaring Outsourcing*: SUI moved student email and calendaring "to the cloud" with Microsoft Office 365. Utilizing a contract which SUI negotiated with a consortium of other Universities, the service is provided to SUI at no cost from Microsoft, and provides students with equal email and calendaring services as faculty and staff, a 2,500% increase in storage space over the former offering (increased to 25GB) and new services including instant messaging, video conferencing tools, and full access to the Microsoft Office Web Apps. Savings for the email and calendaring only are modest at about \$25,000 annually, primarily from eliminating the need to replace student email servers. The cost to provide students with the increased storage and other services SUI now gets for no cost under this agreement would be more than \$50,000 annually.
- *Electronic Calendar*: Standardized the electronic calendaring systems across the entire University greatly reduces the time and effort needed to schedule meetings and

improves the daily efficiency of each person who is being scheduled. Estimated annual savings \$350,000

- *Active Directory:* Using a standard directory and authentication service on campus allows business rules to automatically generate and retire accounts for students, faculty and staff as their status with the University changes. This automation greatly reduces support costs while providing a more secure and consistent IT environment. Estimated annual savings \$240,000.
- *Central Software Office:* A centralized software office that consolidates requests from across campus and negotiates the best discounts possible for software titles also saves considerable time and resources by only sourcing the software and reviewing the legal contracts once. This central point of contact also makes it possible to collaborate with ISU and UNI on joint software purchases. Estimated annual savings \$180,000.
- *Fiber Data Network Consolidation:* The University implemented a single standardized data network for the campus that allows IT to meet common needs and provide for specialized high-performance needs in the most cost-effective manner. In doing so SUI eliminated the need for separate collegiate, departmental or lab networks and infrastructure. The result is the elimination of virtually all Data Network Engineer or Communication Infrastructure positions in the collegiate units. Estimated annual savings \$1,455,000.
- *Data Networking Operations:* SUI supplies in excess of 50,000 high-speed network connections on campus. This is more high-speed Internet connections than any residential provider for any city in Iowa, except Des Moines. It is more than all the rest of Johnson County or Linn County. This has grown from about 15,000 in 2001, a 310% increase. Staffing levels have remained flat.
- *Communication Physical Infrastructure:* Standardizing the fiber and copper cable plant in buildings and across the campus allows communication services to be delivered most efficiently where they are needed. Estimated annual savings \$90,000.
- *Wireless Networking:* Standardizing the wireless network for the campus provides a common wireless experience across campus and reduces the support burden. Estimated annual savings \$193,900.
- *Telephone System:* The telephone system for the campus has been standardized for all users and has implemented IP routing internally. New technologies are being evaluated in pilot projects to determine if further savings are possible. Estimated annual savings \$293,900.
- *Network Maintenance Cost Savings:* Removed 200 devices from annual vendor maintenance contract by using the Limited Lifetime Warranty of new equipment. This provides annual savings of approximately \$110,000.
- *Consolidated ITS Help Desk into One Location:* Created a single point of contact for ITS by assigning the Customer Information Desk duties to the ITS Help Desk and fully eliminating Main Library ITS Help Desk location. Annual savings \$206,200.
- *IT Security:* Recovering from an IT security breach is expensive and time consuming. By reducing the risks and raising awareness about appropriate IT security practices, costs

for handling security problems have been held low. These multi-year campaigns and changes to policy have resulted in a 63% decrease in the number of security incidents on campus. Estimated savings from reduced staff alone is \$100,000.

- *Outsourced Satellite Uplink Service:* Eliminated the on campus satellite uplink service by meeting the needs for uplinks of 65 hours of coaches' shows and news conferences annually, by utilizing the BOREAS network to get end to end transmission from campus to a commercial uplink facility. Annual savings \$330,000.
- *Automated Desktop Management:* Minimizing the costs of managing the tens of thousands of personal computers on campus is done with enterprise-class automated management tools. This allows a single IT professional to manage hundreds of devices remotely and make changes across all the machines in one place. This provides faculty, staff, and students with stable, reliable technology for their daily use, allows the implementation of appropriate security controls, and also allows us to reduce the IT costs required for support. Estimated annual savings \$700,000.
- *Online Collaboration Tools and Courses:* Using online collaboration tools allows researchers from all over the globe to work with each other. These same tools are also used by faculty to provide course materials online to students who can't get to Iowa City, increasing access to the University. Both of these activities promote increased revenue through competitiveness in grant applications and in attracting and retaining students.
- *Student Recruiting:* Recently implemented software systems have allowed the University of Iowa to reach more students than ever before. By targeting students who are more likely to attend the University, this software is driving a higher yield rate, which lowers costs and improves revenue.
- *Telecommunications Workflow and Database:* Implemented a fully integrated, information and workflow management system in the telecommunications department allows the telecommunications facilities, services and workflow to operate in an automated and efficient manner. This has reduced the number of clerks needed to manually track and retrieve this information by 3 FTE, and also improves the department's ability to respond to requests from the campus. Annual savings \$186,531.
- *Data Warehouses:* Data collection and effective use of this information helps individuals and departments function more efficiently. Through data warehouse systems, financial, course and student information can be distributed in a cost-effective manner to those individuals who are authorized to use the data. Estimated annual savings \$300,000.
- *Classroom Improvements:* Upgraded and standardized technology in 119 General Assignment Classrooms across campus, providing better ease of use for faculty and the ability to respond to IT support issues remotely. Estimated annual support savings \$140,000.
- *Data Center Consolidation:* Modern IT servers require specialized power and cooling in order to operate reliably. Providing this kind of power and cooling is not cost effective in small installations. The University of Iowa has eliminated some of these small installations and is now moving more aggressively to move servers to the new campus data center.

- *Research Computing:* High performance computation is essential for many disciplines in modern day research. Traditionally these specialized computational systems were acquired and deployed by individual research groups. These systems typically operated at about 20% utilization. Since late 2010, the University of Iowa has offered a shared high performance computing cluster that provides researchers access to a larger system than they could afford on their own and at a greater efficiency than the previous distributed systems. This shared system operates at over 90% utilization, uses 50% less staffing, and consumes at least 20% less power and cooling. Additionally, this shared system can be housed in a facility that offers more efficient power and cooling and enhanced physical security. There are now more than 50 research groups using the system and are receiving about 2 million hours of computation time each year. More importantly, access to this larger system on campus has enabled research that wouldn't have otherwise been possible. Estimated annual savings \$300,000.
- *Research Data Storage:* As the number of "born digital" research projects has increased the need for data storage has become nearly ubiquitous across disciplines. New centralized research data storage services provide data storage that improves the resiliency and integrity of the data while decreasing labor costs. It is estimated that 25-50% fewer storage servers are required and as much as 50% less staffing is needed compared to distributed research storage.
- *Research Software Licensing:* Campus site licenses and changes in chargeback models are both improving access to software and decrease institutional burden in tracking these titles. One good example is the ESRI arcGIS suite. A site license previously existed for ESRI's products but by working with a state group during 2013, SUI was able to decrease the campus license cost by 20%. The chargeback model to campus was also changed to be a shared cost at the department and college level instead of at the individual user level. This has significantly increased access for campus while decreasing administrative overhead. Another similar success started in 2012 with the purchase of a site license for Matlab.

Selected IT Efficiency Measures

- Increased number of servers managed by 200% in last five years
- Increased number of servers managed per FTE by more than 50%
- Increased storage capacity by 300%
- Decreased total cost of storage by 50% per GB
- Increased storage managed per full-time employee by 61%, from 260 terabytes per FTE to 420
- Number of wireless devices accessing network more than 300% without increasing staff, from 20,000 to more than 70,000.
- Number of PCs managed increased by 100% without increasing staff

Iowa State University

- *Server Virtualization* - ISU implemented a campus server “cloud” that has eliminated 400 servers to date and yielded acquisition and support savings of 50%, nearly \$400,000 annually. The reduction in space and power use has extended the life of ISU's data centers and has significantly reduced the effort needed to manage servers campus wide.
- *Staffing Changes* – the University reduced the central IT workforce by 16% (36 positions) since FY 2009, thereby reducing the IT cost to the campus by \$2,800,000. Service levels for select essential services were maintained by deploying more efficient technologies.
- *Thin Client Technology* - As ISU replaces office and laboratory desktop computers, “thin client” technologies are being used where appropriate. The estimated power savings are nearly 70% and the acquisition and support costs are 40% lower. IT staff can support four times as many thin client desktop computers as traditional desktops.
- *Digital Documents* – ISU is working to significantly reduce printing and handling of paper documents by adapting select business processes to store documents in digital form, and access services using on-line self-serve technologies.
- *Community Source Business Systems* - Iowa State is leveraging the efforts of the higher education community by collaborating with other Research I universities in the Quali Foundation (www.kuali.org) community source for business systems. ISU anticipates saving \$20M-\$40M over the next ten years as compared to implementing vended solutions through a lower deployment cost and elimination of license fees.
- *Consolidated Software Management* - Eliminating low priority software packages and maintenance contracts at an estimated savings of \$130,000/year.
- *Data Storage Cloud* - ISU implemented a campus data storage cloud that to date holds nearly 2 petabytes of university information, including research data, instructional materials, and business records. By partnering with departments and colleges, ISU was able to achieve a high level of service and an economy of scale that makes it cost-effective for colleges to use central services. One unit alone has reduced their data storage costs by \$100,000 annually.
- *Email Consolidation* - ISU consolidated all campus email systems into a single campus-wide system, enabling academic departments to save \$170,000 annually and redirect IT staff efforts to high priority needs in teaching and research programs.
- *Email Outsourcing* - ISU moved student email to the “Google Apps for Education” cloud to offer a much richer set of communication and collaboration tools and additional storage options. Savings are modest at \$25,000 annually, primarily from eliminating the need to replace student email servers.
- *Printing* - Where feasible, “equipped” printers are set to duplex print jobs. Additionally, a new campus-wide printing system has been implemented (for ITS managed student printers) that offers tracking of total paper usage within designated printing “environments”. This has resulted in a 33% reduction in paper use in one semester.

- *Cloud Services* - ISU is far along in investigating “cloud” service providers for select communication services including phone and voicemail, videoconferencing, email, student file storage, and other applications.
- *Cell Phone Contracting* - Iowa State University has already achieved significant savings through competitively bidding its wireless cell phone contracts. Doing so provided a primary carrier and a secondary carrier with significant reductions in plan cost. It also allowed ISU to have its wireless building infrastructure upgraded at no added cost (\$~500,000 value) to maximize coverage.
- *Electronic Workflow* - ISU has enacted many small efficiency efforts to improve electronic workflow and reduce the printing of documents. These include processes in student admissions, financial aid, course registration, and many other business processes.

University of Northern Iowa

- *PC Bid*: UNI participates with UI in an annual PC bid for the whole campus to leverage what are already low education pricing. This has resulted in better pricing than any multi-state or consortia purchasing contracts the university has access to.
- *Outsourced Email and Calendar to Google*: UNI completed the process of outsourcing all faculty/staff/student email and all university calendar activities to Google. Through this partnership UNI is able to provide services at a fraction of the cost that would have been incurred, if it were to provide these services themselves.
- *Server Virtualization*: UNI’s server virtualization project has reduced costs associated with equipment acquisition, energy consumption, computer room space, and staff time. UNI currently has 470 virtual servers running on 30 physical servers.
- *Google Apps for Education*: UNI’s Google partnership provides collaboration and communication capabilities that will further increase effectiveness and efficiency in the near future. Recently, Google+ was made available to campus and this application includes a video conferencing capability for up to 10 people at a time for free.
- *Successful merger of Institutional Research & ITS*: Institutional Research and ITS were successfully merged with reallocation/savings of over 1/4 million dollars of administrative spend.

Ease of-use Improvements

- *Implemented Student Self-Service Wi-Fi and computer lab password reset*: UNI provided a self-service capability for students to conveniently reset their own Active Directory password from within their MyUNiverse portal. This password is utilized for both WiFi and computer lab access.
- *Centralized University-Wide Software Purchasing*: Over the past few years, several strides were made in centralization of funding of software like that of Microsoft, Adobe (Industry leading content creation software), Qualtrics (Research and Surveying tool) and Mathematica (Visualization of complex mathematical concepts). Access to Lynda educational videos was another significant contribution.

- OBIEE Business Intelligence & Data Warehouse Implementation: UNI implemented the Oracle Business Intelligence data warehouse and reporting system in conjunction with the SIS. This data warehouse enables efficient compliance with increasing Federal and State reporting requirements in an efficient and effective manner.
- UNI implemented Automated deprovisioning of access to fileshares and computer systems by departing employees and graduating students to reduce risk and increase efficiency.

Iowa School for the Deaf maintains a back-up server at ISU. The School also installed desk-top video conferencing equipment to cut down on travel, and partners with a private company, Sorenson Video, for free video equipment use by deaf staff and students. These efficiencies allowed a decrease of .50 FTE.

APPENDIX 3

PERSONNEL AND BENEFITS

University of Iowa

SUI Benefit Cost Savings have been reviewed and a summary of changes follows:

- Generic Drugs: Implemented in 2006, offering all generic drugs at no cost to employees and their dependents. Generic drug usage has increased 22%. Annual savings of **\$2,400,000**.
- College of Dentistry Student Dental Clinic Program: Implemented in 2008, utilizing the Student Dental Clinic. Program assists in supplying the dental students with patients while employees and dependents have their payment responsibility waived. Annual savings of **\$150,000** in dental insurance claims
- UI QUICKCARE Clinics: Implemented in 2008, utilizing a partnership with the Carver College of Medicine/University of Iowa Hospitals & Clinics/Community Medical Services Clinics, employees and dependents have their payment responsibility waived. Use of the six retail clinics reduces emergency room utilization at night, weekends, before, during and after work. Annual savings of **\$1,800,000** in health insurance claims
- Life Insurance: First phase implemented in 2009 reducing the maximum group life insurance covered amount from \$500,000 to \$400,000. The second phase in 2010 reduces the multiple from 2.5 times annual base salary to 2.0 times. Annual savings of **\$2,200,000**.
- Health Care Costs: Healthcare cost increases over the last five years for SUI's health care plans are substantially reduced and are below all industry standards. Premium Costs – SUI average has been 2.1% single and 3.9% family; national average has been 5.4% single and 6.9% family. Given the internal financial controls within the new system, savings will increase in each subsequent year. This does not include the SUI merit staff who are under the state health care plans, which are unchanged.
- Two successive years of faculty/staff fringe benefit cost decline. Fueled by healthcare cost savings, University-wide savings in current year is \$20 million.